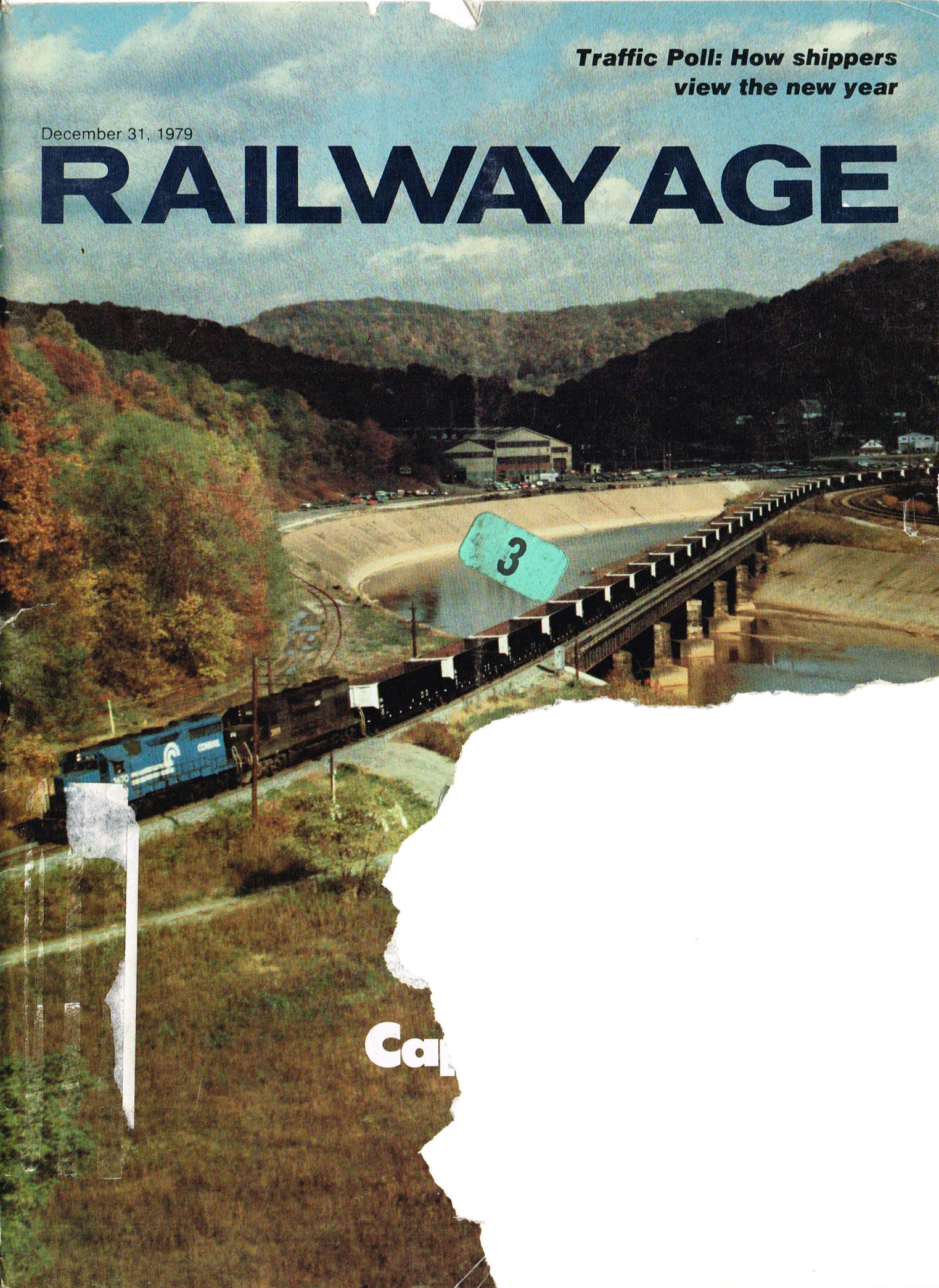
Traffic Poll: How shippers view the new year

December 31, 1979

RAILWAY AGE



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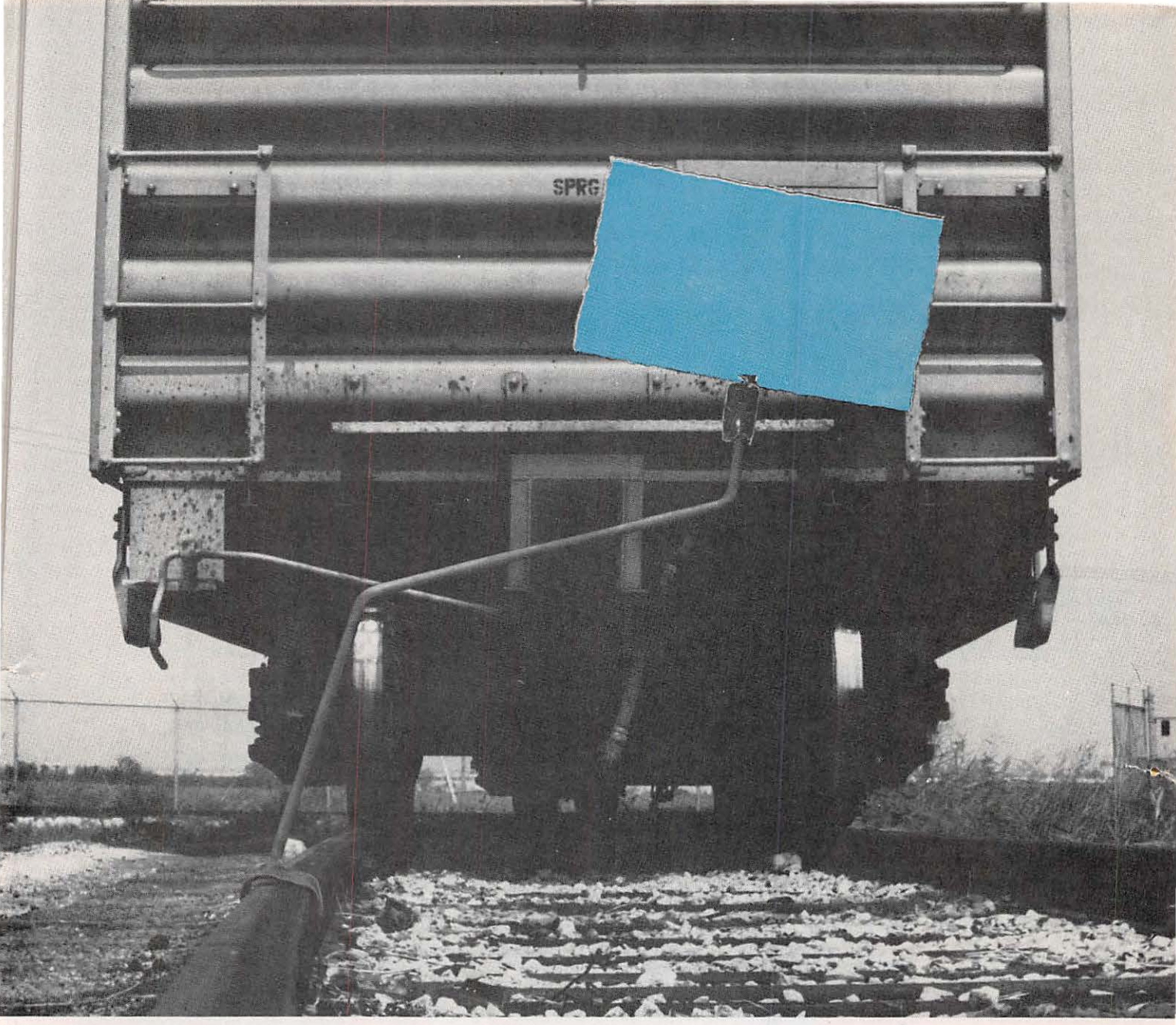

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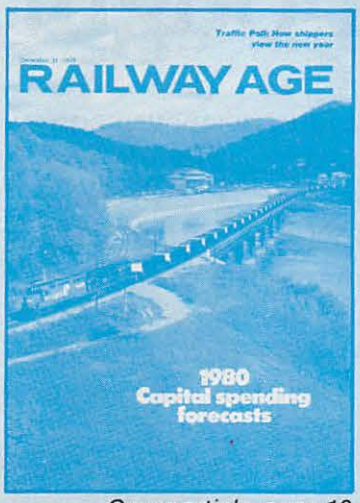
RAILWAY AGE

December 31, 1979

FEATURES



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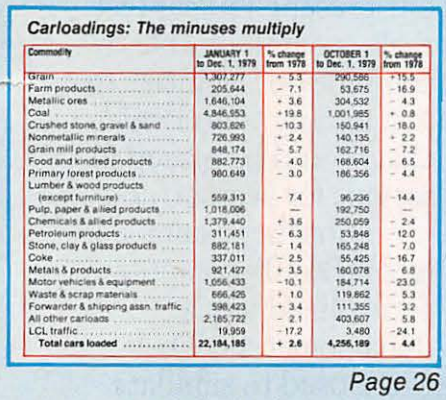

Carloadings: The minuses multiply

Commodity	JANUARY 1 to Dec. 1, 1979	% change from 1978	OCTOBER 1 to Dec. 1, 1979	% change from 1978
Grain	1,307,277	+ 5.3	290,586	+15.5
Farm products	205,644	− 7.1	53,675	−16.9
Metallic ores	1,646,104	+ 3.6	304,532	− 4.3
Coal	4,846,553	+19.8	1,001,985	+ 0.8
Crushed stone, gravel & sand	803,826	−10.3	150,941	−18.0
Nonmetallic minerals	726,993	+ 2.4	140,135	+ 2.2
Grain mill products	848,174	− 5.7	162,716	− 7.2
Food and kindred products	882,773	− 4.0	168,604	− 6.5
Primary forest products	960,649	− 3.0	186,356	− 4.4
Lumber & wood products (except furniture)	559,313	− 7.4	96,236	−14.4
Pulp, paper & allied products	1,018,006	—	192,750	—
Chemicals & allied products	1,379,440	+ 3.6	250,059	− 2.4
Petroleum products	311,451	− 6.3	53,848	−12.0
Stone, clay & glass products	882,181	− 1.4	165,248	− 7.0
Coke	337,011	− 2.5	55,425	−16.7
Metals & products	921,427	+ 3.5	160,078	− 6.8
Motor vehicles & equipment	1,056,433	−10.1	184,714	−23.0
Waste & scrap materials	666,425	+ 1.0	119,862	− 5.3
Forwarder & shipping assn. traffic	598,423	+ 3.4	111,355	− 3.2
All other carloads	2,165,722	− 2.1	403,607	− 5.8
LCL traffic	19,959	−17.2	3,480	−24.1
Total cars loaded	**22,184,185**	**+ 2.6**	**4,256,189**	**− 4.4**

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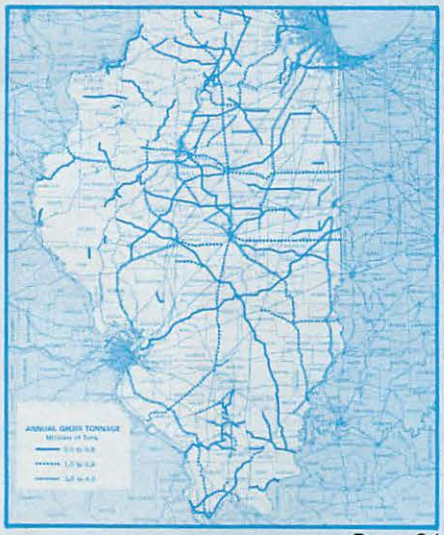

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16 Capital outlays will top $6 billion in 1980

Freight car and locomotive installations will continue at a high rate, maintaining the strong pace set in 1979. Investment in fixed-plant improvements, at a record level in 1979, is headed for a new high in '80.

26 Late '79 traffic slump hasn't bottomed out

A downturn that is showing up in nearly all commodity groups will result in a modest slippage in overall carloadings in first-half 1980, but grain, coal, and chemicals will continue strong.

28 In the Midwest, a bold bid by C&NW

The Chicago & North Western wants to absorb certain grain-gathering lines of the Rock Island and Milwaukee in Iowa and Minnesota, and thus forestall an "invasion" by outside railroads.

31 Illinois: Away from railroading, into track improvement

"We've learned enough so that state policy no longer favors starting any new short lines, nor does it favor operating subsidies," said the head of the state's Bureau of Railroads.

NEWS

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10 Truk-Train set to roll in March
11 Watching Washington
11 Railroads fight coal rate ceiling
12 Incentive per diem: Dissension at ICC
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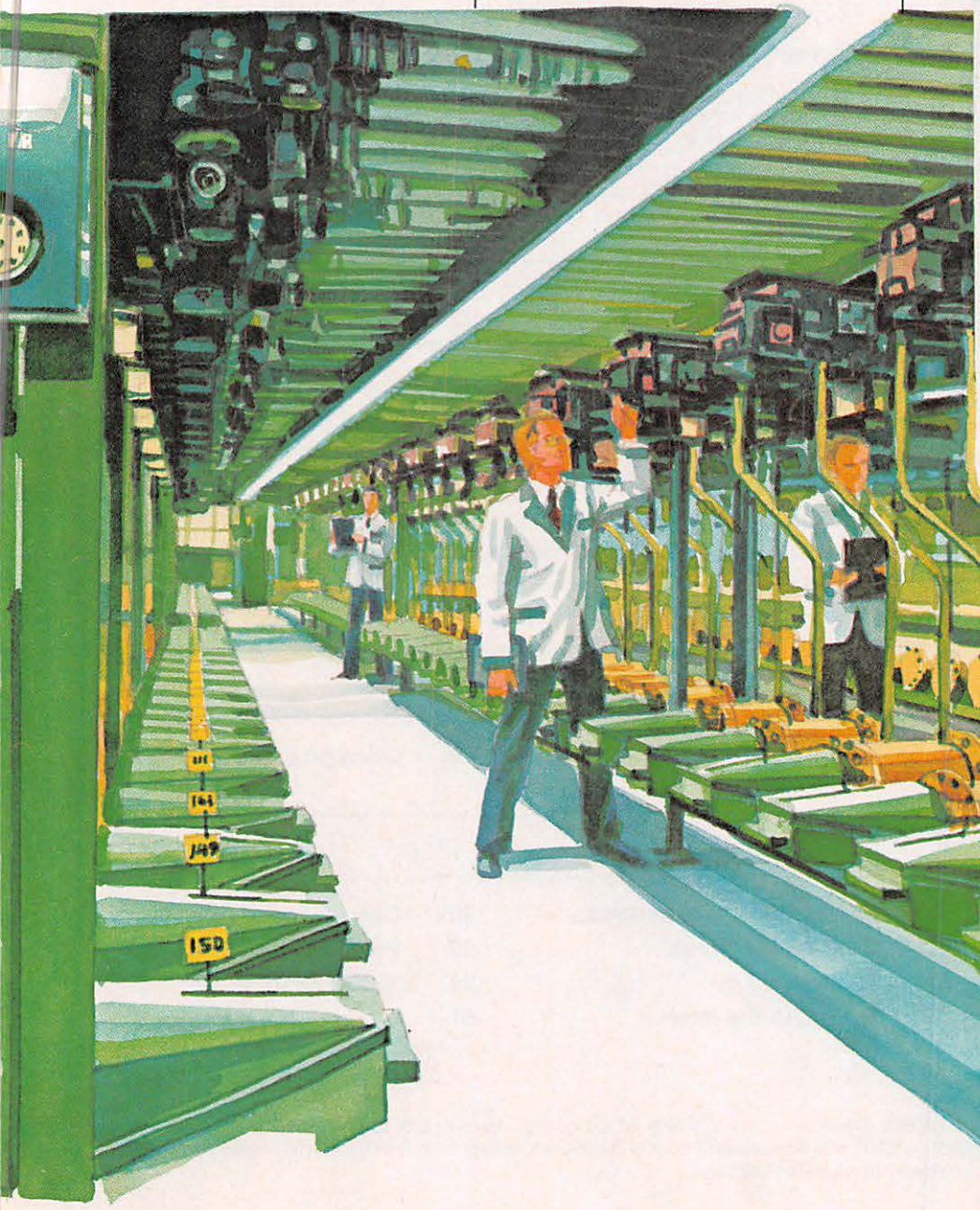
COVER: Conrail moves a string of Coalporter cars out of Bethlehem's No. 5 plant at Johnstown, Pa. Destination: Grand River Dam Authority in northeastern Oklahoma, which has acquired 484 of the cars.

WABCO's train of thought.

Nowadays, train consists and cars come in endless varieties. This requires a constant study of operations and equipment to assure profits. That's why WABCO invests in the brainpower, the software and facilities to help increase your productivity.

For instance, WABCO is now installing a new, one-of-a-kind, 250-car air brake test rack to keep ahead of the industry's movement toward larger freight consists. It contains all the components, piping and fittings for the air brake details of a 250-car freight train so we can accurately evaluate brake equipment performance for present and future needs. Incorporating this with our present 150-car test rack, we will be able to combine our facilities to test for any train length that would be placed in service for years to come.



Another example is WABCO's computer-controlled inertia dynamometers. They are used to simulate in-service braking situations and test disc brakes, brake shoes and their relationship to car wheels. Huge

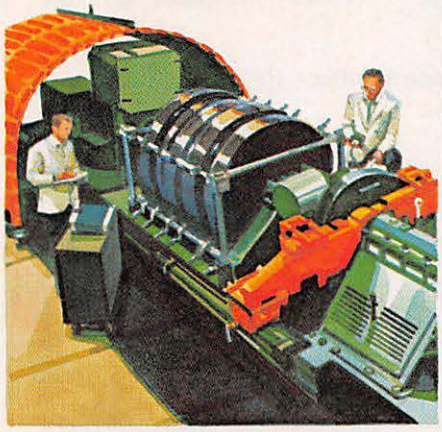
WABCO

An American-Standard Company

It never stops.

inertia discs simulate car weights ranging from 26,000 to 400,000 lbs.

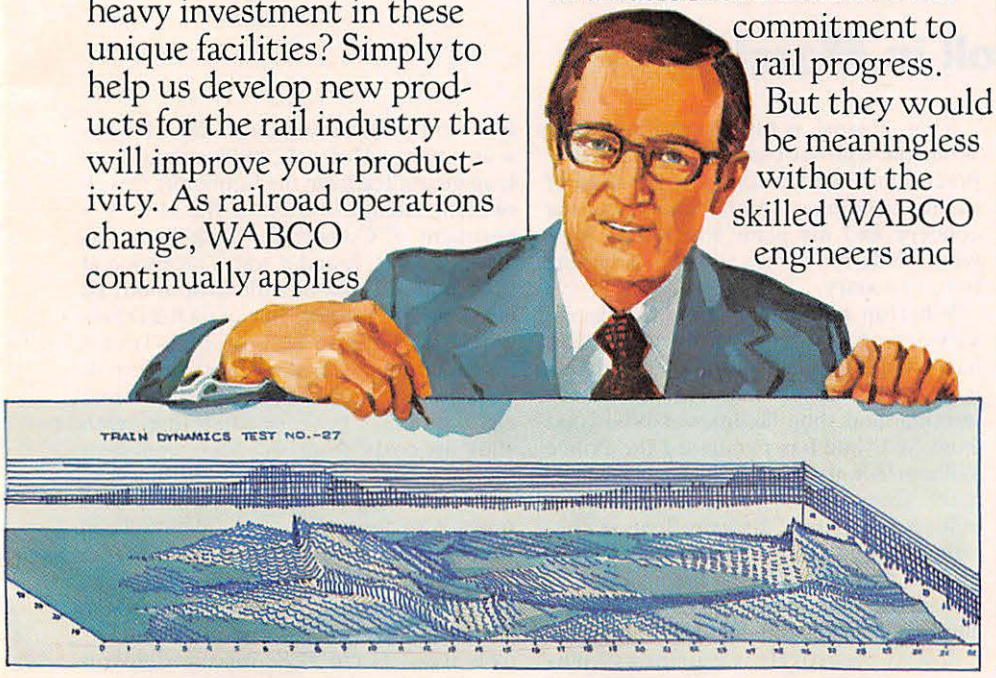
The dynamometers can simulate effects of up to 250-mph stops while record-



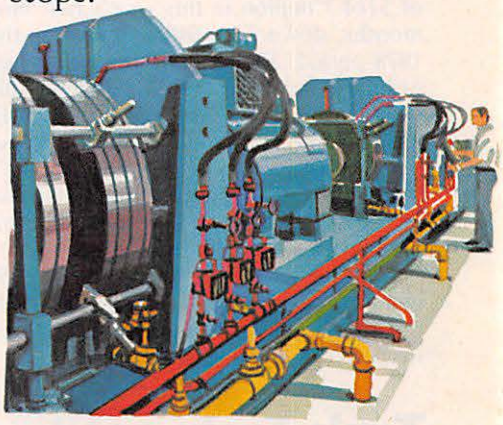
ing and analyzing response times, pressures and temperatures.

The reason for our heavy investment in these unique facilities? Simply to help us develop new products for the rail industry that will improve your productivity. As railroad operations change, WABCO continually applies the most innovative techniques to the science of stopping a train safely and economically. In fact, we conduct one of the world's largest privately funded research and development programs for railroad braking. WABCO innovations such as the WABCOPAC® Brake Assembly, SC-1 Empty and Load Equipment and the ABDW Freight Brake Control Valve were the result of such research. The ABDW Control Valve traveled thousands of miles of printout time before it was ever installed on a train.

Dynamometers and ultra-long air brake test racks are dramatic illustrations of our commitment to rail progress. But they would be meaningless without the skilled WABCO engineers and technicians that go with them—the experts who know how to turn sophisticated technology into practical solutions for you.



People in the rail industry have been riding WABCO's train of thought since George Westinghouse invented the air brake. It's a train that never stops.



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Rate of return at 2.53% as earnings soar

Due mainly to sharply reduced deficits in the East, the railroad industry as a whole was able to report ordinary (net) income totaling $476.1 million for the first nine months of 1979, compared with a deficit of $39.4 million for the corresponding 1978 period.

Net railway operating income (NROI) for the first three quarters rose from $145.0 million in 1978 to $487.2 million this year. Rate of return for the 12 months ended Sept. 30 was 2.53%, up from 0.94% a year earlier. (Rate of return is based on net railway operating income. Ordinary income differs from NROI in that it is calculated after income from nonrailroad operations is added and interest on debt and other fixed charges is deducted.)

Operating revenues in the first three quarters amounted to nearly $18.8 billion, up from almost $15.9 billion in the '78 period. Operating expenses rose to $18 billion from 1978's $15.6 billion.

Eastern railroads reported a net deficit of $114.7 million in this year's first nine months, down from $485.5 million in the 1978 period. Railroads in the South had ordinary income of $225.3 million this year, up from $92.3 million in 1978; ordinary income of railroads in the West rose from $353.8 million to $365.6 million.

For the third quarter, all railroads had ordinary income of $35.9 million, compared with $29.6 million in 1978.

For the first three quarters of 1979, eight of the 37 reporting Class I railroads operated at a loss—four in the East, three in the West, and one in the South.

CLASS I RAILROADS IN THE UNITED STATES

		1979 (millions)		1978 (millions)
For the third quarter				
Operating revenues		$ 6,478.3		$ 5,396.9
Operating expenses		6,348.2		5,266.5
Income taxes on ordinary income		54.7		51.1
Provision for deferred taxes		29.6		27.6
Net railway operating income				
United States		51.4		56.5
Eastern District	Def.	106.2	Def.	151.8
Southern District		82.0		60.6
Western District		75.5		147.7
Ordinary Net Income[1]				
United States		35.9		29.6
Eastern District	Def.	89.8	Def.	82.9
Southern District		68.7		9.2
Western District		57.0		103.3
For the first nine months				
Operating revenues		18,761.8		15,872.1
Operating expenses		18,002.5		15,542.4
Income taxes on ordinary income		153.3		115.5
Provision for deferred taxes		134.7		85.6
Net railway operating income				
United States		487.2		145.0
Eastern District	Def.	161.5	Def.	518.3
Southern District		250.5		222.5
Western District		398.3		440.8
Rate of return*				
after provision for deferred taxes		2.53%		0.94%
Ordinary net income				
United States		476.1	Def.	39.4
Eastern District	Def.	114.7	Def.	485.5
Southern District		225.3		92.3
Western District		365.6		353.8

Def.=Deficit *Rate of return for 12 months ended Sept. 30. [1]Income before extraordinary items.

Truk-Train set to roll in March

Drivers' Truk-Train of America, Inc., a new, Florida-based company, is preparing to give a revolutionary concept in rail/highway freight operations its first U.S. test. In March 1980, the company plans to run its first Truk-Train—consisting initially of 45 60-foot flatcars, each carrying a loaded highway tractor-trailer rig, plus roomette cars to sleep the drivers of those rigs and dining-lounge cars to feed them. The train will operate between Wildwood, Fla., and Woodbridge, Va., three times a week in each direction, via Seaboard Coast Line and Richmond, Fredericksburg & Potomac. About six months later, a similar train will go into service between Wildwood and Cincinnati, via SCL and Southern. Eventually, Truk-Trains could be shuttling over major traffic arteries across the country, with a maximum of 75 flatcars, three sleepers, two diner-lounges, work car, and caboose.

That, at least, is the vision of James E. Wharton, a motor-carrier lawyer and ICC practitioner who is founder and head of the new company. As he talks about the concept and his plans for putting it to work, Wharton comes across as anything but a visionary.

Wharton has already won the necessary operating authority from the ICC and has worked out operating agreements with SCL and RF&P. He has leased terminal and shop facilities at Wildwood from SCL and has persuaded the Prince William County (Va.) Industrial Development Commission to approve a $1.7-million bond issue to help finance construction of terminal facilities at Woodbridge. Through SCL, he has arranged to lease an initial 100 flatcars from Trailer Train with "several hundred" more to follow as needed. He is acquiring surplus passenger equipment from Amtrak and locomotives from western roads. He has won approval of a $2-million long-term loan guarantee from the Economic Development Administration of the U.S. Department of Commerce. Truk-Train has also, he says, found a warm reception at the Federal Railroad Administration; he is asking FRA, under one of its R&D programs, to pick up 60% of Truk-Train's losses during a specified contract period. Wharton expects that period to be around eight months, because after that, with start-up costs absorbed, he is confident the enterprise will break into the black.

"The concept is not really a new one," notes Wharton. "I understand it has been successfully tried in Germany and in Australia, though in Australia it has been a rather crude operation, with the drivers sleeping in bunk cars and cooking their own food. Some U.S. railroads gave it consideration a few years ago, and Auto-

Train was interested at one time. Now, the time appears to be ripe, with the increase in fuel prices and in truckers' operating costs generally.

In an interview with *Railway Age*, Wharton described the operation this way:

"We will pay the railroads a mileage charge for operating over their tracks; we will also pay train crew costs. The cost to the user—the motor carrier—will be somewhere around 55 cents a mile. That will cover everything, including meals for the drivers, catered by a national food service.

"A principal attraction will be, of course, the fuel saving. It takes around 200 gallons of diesel fuel to move a tandem tractor and an over-the-road loaded trailer from mid-Florida up to Woodbridge. The net fuel saving achieved by moving these trucks over the rails rather than over the road—taking into account the fuel consumed by the locomotives—will be approximately 45%. Another important factor is that the life of the highway tractors and trailers will be substantially lengthened—and a tandem tractor costs $50,000 to $60,000 and a trailer up to $20,000. There will be labor savings—one driver can do the work of two. The net saving to the motor carrier will be around 25 cents a mile. The first Truk-Train will depart Florida around 9 p.m., arriving in Virginia the following afternoon. This will enable the driver then to make second morning deliveries at any point in the northeastern states. In the reverse direction, freight from the northeastern states can make second morning delivery."

For the railroads, says Wharton, the Truk-Train concept is attractive because it will permit them to penetrate a large segment of the motor carrier market that is denied to conventional piggyback.

What is the railroad reaction? "With diesel fuel costs headed for $2 a gallon, and with the railroads' four-to-one fuel efficiency edge over highway carriers, I think it makes a lot of sense," one railroad officer told *Railway Age*.

Railroads fight coal rate ceiling

A mid-December attempt to inject a coal rate ceiling into the Senate's railroad deregulation bill sent rail lobbyists scurrying to Capitol Hill with warnings that such a move would be disastrous.

In a background memo circulated widely in Congress, the AAR warned that the ceiling proposed by Senator Russell Long (D.-La.)—150% of variable costs—would cost the railroads more than $500 million a year in net railway operating income.

"That loss, which would exceed the industry's net railway operating income in each of the past four years, would unquestionably ruin the industry," said the

Watching Washington

A new battlefront: "Competitive equity"

It's true what they say about the Interstate highways, that they were built strong enough to handle a 120,000-pound battle tank during a national emergency. However, if 50,000 commuters began driving battle tanks to work every day, you wouldn't expect the highways to last for their full design life of 20 years. And that, according to a government study, is more or less what is happening to our highways, which are wearing out faster than anticipated—so fast that repair work hasn't been able to keep up.

The culprits, says the General Accounting Office, are not tanks but trucks, whose load weight has risen from around 50,000 pounds in the 1950s to 80,000 pounds in most states today. One 80,000-pound tractor trailer does the same damage as 9,600 cars, the GAO says. The report came out in July just at a time when truckers were pushing to have load limits lifted to 80,000 pounds in the remaining states, in the name of greater fuel efficiency. Trading off the long life of the highways in order to save diesel fuel might be a sensible choice, if it weren't for the existence of an even more efficient alternative, which should come readily to mind to readers of this magazine.

The cold war between railroads and trucks is heating up again, touched off by the federal effort to establish a transportation policy that will save oil. In the past month, the Association of American Railroads, with new ammunition from the GAO report and several state studies, has launched a counterattack, including a piggybacking ad that marks a new aggressive turn in its Myth/Fact ad campaign (budgeted for more than $1.5 million in 1980).

The AAR wouldn't mind so much that the trucks were tearing up the highways if the trucks were paying their share of the repair bill—and passing those costs on to shippers. However, the AAR has studies to show that automobiles and small trucks have been subsidizing freight movement in the trucks, whose user charges have been slight compared to the damage they do. The AAR's new Intermodal Policy Studies Group, which is carrying the campaign for "competitive equity" to the various states, argues that present policy is actually encouraging shippers to shift to the less fuel efficient mode.

So far the truckers' response has been to accuse the railroads of exaggerating their claims of fuel efficiency. Forget coal and grain—on competitive traffic, the truckers say, there is only a minimal difference in fuel efficiency. There is some truth to that argument. But new cars and innovations in aerodynamics have improved the fuel efficiency of many TOFC operations to better than twice that of competing trucks. A new study by the Department of Energy of a first-rate piggyback operation, Milwaukee's Sprint, shows the train getting 13.5 loaded trailer miles per gallon, while its head-to-head trucking competition gets only 5.1. Furthermore, says the AAR, the truckers don't usually consider the oil and oil products needed to rebuild the roads they've torn up.

Target: State user fees

Though Congress has been toying with the idea of a national 80,000-pound weight limit—a move that, in the railroads' eyes, would only exacerbate the present inequality—most of the battle for competitive equity this year is going to be waged in the state capitals, because it is the states that have to pay for most repairs to the $96-billion federal aid highway system. A major fight will be in the Mississippi Valley, where seven states are resisting pressure to raise the ceiling from 73,280 pounds to 80,000. To truckers, those states are crucial, because they form an effective blockade of coast-to-coast traffic.

The real effort, though, will be to get the states to reform their user fee policies as they search for new highway money to pay the mounting repair bills. Across-the-board fuel tax increases, favored by truckers, would only increase the subsidy of big trucks. Higher truck registration fees could work only if administered by the federal government, to prevent truckers from flocking to the flag-of convenience state with the lowest fees. Tolls are an effective, but in many places impractical, way to get the repair bill to the right party. In Colorado, which has an 80,000-pound limit, a graduated fuel tax forces truckers to pay more of their share of the cost of maintenance. That's an idea the AAR would like to see spread.

Future actions of Congress will be affected by two studies now in the works: a study of economic and energy use impact of uniform truck sizes and weights, due in 1981, and a cost allocation study, due in 1982. Who knows? With rising maintenance and fuel costs and declining traffic, we might someday witness an abandonment proceeding on the interstate highway system.

AAR. "Almost the only alternative would be much higher rates for other rail shippers who would have no special legislative rule; but much of their traffic is highly competitive. Inevitably such a huge loss of revenue would mean further deterioration in already inadequate rail earnings, leading to poorer rail service and the eventual need for massive public subsidies to preserve the existence of marginal railroads. Conrail would be an outstanding and unfortunate example."

The memo pointed out that coal rates "already yield less than average revenue. Comparison of the revenue per ton-mile realized on coal traffic with the revenue per ton-mile realized on other commodities, even similarly low-valued ones, indicates that coal rates are neither excessive nor unfairly burdensom." (See table.)

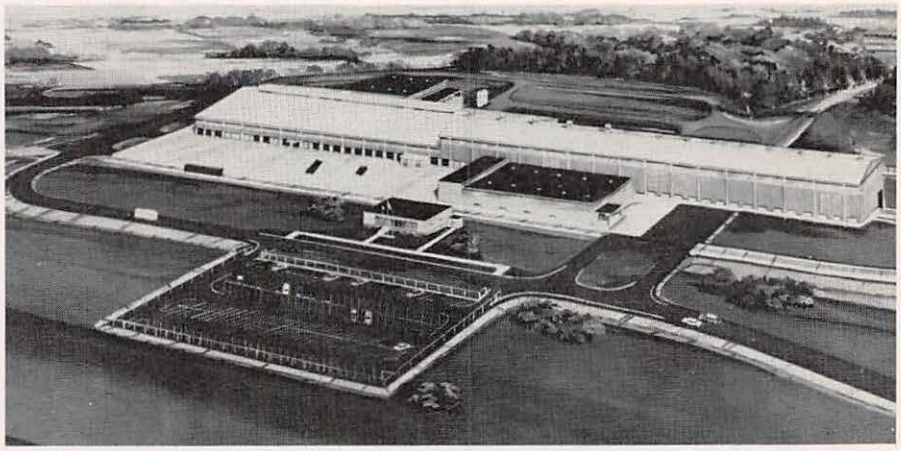
The move to impose a ceiling on coal rates led to the writing of another memo predicting dire results for the industry—this one by Rush Loving, a former *Fortune* magazine editor who is now director of public affairs for the Office of Management and Budget. Loving wrote the memo for internal circulation within the OMB; the *Chicago Tribune* obtained a copy and gave it front-page treatment Dec. 9. Loving said that various aspects of the proposed deregulation bill—including the coal rate cap—would eventually plunge many railroads into bankruptcy.

Commodity	Revenue per ton-mile	Percentage of overall average revenue per ton-mile
Bituminous coal	1.88¢	57%
Grain	2.76	83
Gravel, sand	2.85	86
Iron ore	3.08	93
Crude petroleum	2.76	83
Pulp	2.76	83
Total traffic	3.32	100

The Loving memo said, among other things, that the Senate bill as it would appear with the Long amendment "would permanently hold down coal rates that are already too low and could not provide enough revenues to adequately offset the cost of maintenance of way. Not only that, but there would be insufficient revenues to even complete the present struggle to catch up from past decades of deferred maintenance."

What Senator Long finally proposed to the Senate was not a specific coal rate ceiling, but language that would require the ICC to establish standards for determining a ratio of revenue to variable costs, subject to congressional review; railroads raising their rates above this ratio would have to bear the burden of proof. The railroads would not support a bill containing that language.

"What we are seeing," said Long in a Senate speech Dec. 17, "is a highly inflationary contest between the coal producing states in the northern great plains (Montana in particular) and the railroads (through skyrocketing transportation charges) to see who will capture the differential between lower cost domestic coal and the BTU equivalent price of OPEC oil. If one tried to speculate where the contest will end under the present rules, he need only look at where the price of OPEC oil will be two or 10 years from now."



Griffin's new plant will closely resemble this drawing of its Keokuk, Iowa, plant.

Griffin to build eighth wheel plant

Griffin Wheel Co., the world's largest producer of freight car and locomotive wheels, has picked an 80-acre site at Groveport, Ohio, about five miles southeast of Columbus, for its eighth wheel plant. Due for completion late in 1981, the new plant will be able to turn out approximately 200,000 wheels a year.

Goff Smith, president of Amsted Industries, Griffin Wheel's corporate parent, cited two reasons underlying the company's decision to expand its capacity: "First, new freight cars are being built at a rate which is just about capacity for the industry. In the last 12 months 86,000 new freight cars were built. Second, railroad revenue ton-miles continue to grow, thereby increasing the replacement demand for wheels."

Griffin expects to serve three railroads—Chessie, Norfolk & Western, and Conrail—from the new plant as well as the following carbuilders: International Division of PACCAR at Kenton, Ohio; General American Transportation Co., Sharon, Pa.; Pullman Standard, Butler, Pa.; Greenville Steel Car, Greenville, Pa.; Bethlehem, Johnstown, Pa.; Emons Industries, York, Pa.; Berwick Forge, Berwick, Pa.; Berwind Railway Services, Hollidaysburg, Pa.; and Ortner Freight Car Co., Covington, Ky.

Griffin's other plants are at Bensenville, Ill.; Keokuk, Iowa; Kansas City, Kan.; Bessemer, Ala.; Colton, Calif.; St. Hyacinthe, Que.; and Winnipeg, Man.

All of the plants employ a proprietary process called Controlled Pressure Pouring, which casts wheels to close tolerances and requires minimum machining.

Incentive per diem: Dissension at ICC

The ICC has officially decided to take another look at its incentive per diem program for rail boxcars and gondolas, after a study by its Office of Policy and Analysis concluded that IPD has had "counterproductive" side effects, has hurt car utilization, and threatens the financial condition of the rail industry.

In opening a rulemaking proceeding proposing to eliminate IPD, as requested by the Association of American Railroads and the American Short Line Railroad Association, the ICC called for public comment on the overall effectiveness of the IPD program; the program's impact on railcar shortages, fleet size, and railroad system efficiency; and whether the program should be eliminated or modified.

Since it began in 1970, the IPD program has successfully encouraged car acquisition, but per diem charges have risen beyond the current cost of capital, said the OPA advisory study. "The resulting overinvestment has raised the overall cost of railroad transportation without any observable offsetting benefits from improved car utilization," the study said. Short-line railroads and car-leasing companies have been able to get "special benefits" from the program, said OPA. "In addition, the full cost of the short-line-provided cars falls on the line-haul railroads and creates an increasing drain of funds from the industry. Moreover, the short-line railroad demand for cars is creating upward pressure on freight car prices." *(Continued on page 14)*

Clinchfield clears a derailment...fast

It is 9:45 a.m. when the radio crackles in the chief dispatcher's office at Erwin Time freight 95 has a car off at mile post 168.5. It's a covered hopper loaded with 80,000 pounds of phosphate at a remote location on a ledge between a mountain and the Toe River, 35 miles to the south.

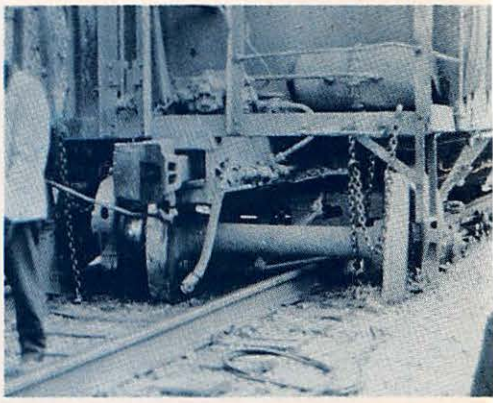
At 10:06 a.m. a Chevrolet truck equipped with Hy-Rail and a National crane is dispatched to the scene with an M. of E. crew and a Hoesch rerailing system.

How the Clinchfield cleared its busy main line fast and efficiently is shown in the photo sequence below.

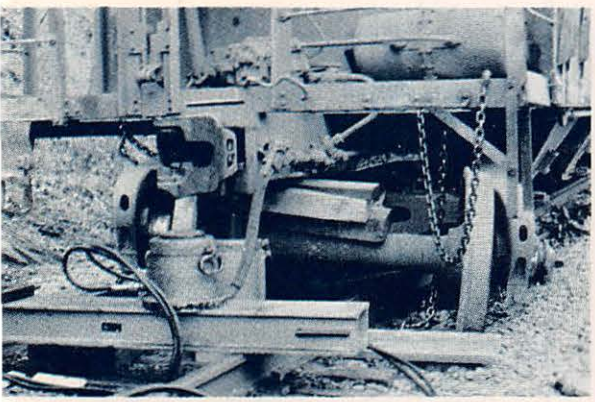
In addition to the time savings, this method of rerailing involves only a very small fraction of the old manner in which a wreck train would have been required.

10:56 a.m.—Crane truck is jockeyed from nearest road crossing, 1-1/2 miles from derailment, to main track for Hy-Rail operation.

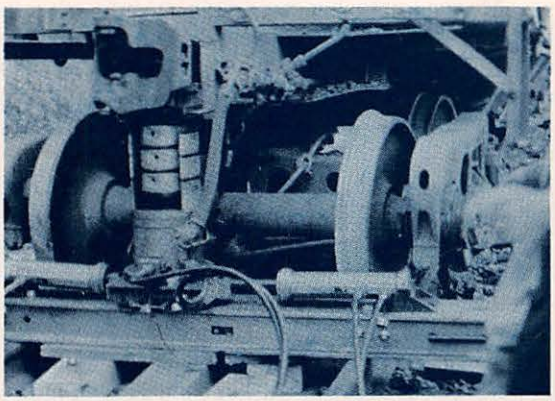
11:02 a.m.—Crane truck, moving backwards in order to be positioned against derailed car, moves to derailment site.



11:08 a.m.—At arrival, crew finds heavily loaded car with forward truck at near right angles to rail.



11:37 a.m.—Hoesch hydraulic rerailer is positioned under coupler, with lines connected to compressor on crane truck.



11:52 a.m.—Hydraulic jack has raised truck clear of railhead and moved it laterally, positioning wheels for rerailment.

12:16 p.m.—#95 is rolling at restricted speed with cripple in tow to be set out at first side track.

For complete information about Hoesch hydraulic rerailment equipment, call or write—

HOESCH AMERICA

HOESCH AMERICA, INC., 3340 Peachtree Road, N.E., Tower Place 2470/Atlanta, Ga., U.S.A., 30326 / Telephone 404/261-7111
Telex 549505

HOESCH RERAILING SYSTEM OWNERS INCLUDE:

CONRAIL · L&N · SR · Western Pacific · SCL · Georgia RR · Indiana Harbor Belt · Clinchfield Railroad · mo-pac · Port Authority Transit · BM&LP RR · MBTA · BART · bai · CN · SEPTA · GT · Cuyahoga Valley Railway Co. · NW · Algoma Central Railway · M&O · The West Point Route · British Columbia Railway · path · metro · Kansas City Southern

H-783

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Lines on Labor

GUS WELTY

A NEW . . . WHAT?

Even if 1980 is not the start of a new decade (and it isn't, really, unless A.D. began with a Year Zero) it's still, perhaps, a time for new-think, for setting aside old stuff, for trying to do—well, for want of a better word—"better." The new year, of course, is an election year, and so there will be a lot heard about another good word, "leadership," and the man in the White House will be saying that he's a good leader, while the other fellow with the familiar name will be saying that he could be a better one, while a covey of folks from the other party will be saying that there's no business like show business, and anything you can do I can do better, and so on and so forth. It's all, probably, part of the game, and the nation will survive no matter who survives after the election next November. The nation, after all, *has* survived some rather questionable choices at the polls, some rather questionable pols. But, to go from the cosmic to the mundane—some would call it—what about this industry called railroading; what about its managers and its union employees; what about the future of this enterprise and its people? What about tomorrow, new decade or not?

IF THERE ARE LEADERS, WHERE ARE THEY?

In railroading, it seems clear—to some, at least, at this point—that the main need, on both sides of the table, is a need for people with, euphemistically speaking, courage. In other words, perhaps the time has come for both management and labor to knock off the crap and recognize that unless railroads can make changes in work practices—selectively and carefully—half a million railway employees may wind up working for the federal government (and if any employee thinks that this might be a good deal, he had better take another listen to what the tunes coming from government now seem to be, as regards the GAO and Conrail, as regards Congress and Chrysler, as regards. . .). But leaders: Where, really, are they, or where will they come from?

First, management. Management has no single strong voice, no Dan Loomis, no Doc Wolfe, no Bill Dempsey. Management has a good man, in Charles Hopkins, and it has good men on its top-level committee—but management is not 100% united on what needs to be done and, from the evidence, it may still be in a position of fire and fall back.

Secondly, labor. Labor, as of 1980, has one strongman, and he is Fred Kroll, president of the Clerks organization. Kroll is bright, personable, young, and ambitious, an honored personage by *Time* magazine in its 1979 look at candidates for tomorrow's leadership; some guess that Fred Kroll, now in his early 40s, could be looking at an AFL-CIO presidency, down the road, and there are those who say his first step might be to try to set up a pan-railroad organization which would include, perhaps, everybody but the ops. Fragmented as it is, rail labor surely needs *some* leadership—but the very fragmentation would make anybody wonder whether a Kroll (or a Fred Hardin of UTU, or an Ole Berge of BMWE, or an Orville Jacobson of BRC, or even a John Sytsma of the proud and senior BLE) could make leadership stick.

WITHOUT LEADERS, THOUGH, WHAT HAPPENS?

Decade beginning or not, 1980 still represents a year in which rail management and labor ought to—maybe have to—get their thing together. It's a year in which the national scene ought to be relatively tranquil—but a year in which local negotiations, in a number of areas, should be taking place. It's a year in which individual railroads ought to be spelling out what they need and why, and a year in which local—*local*—union officers ought to be able to act on and react to these needs. It could be a good year. Or . . .

The OPA suggested that recently raised basic per diem charges should provide sufficient incentive for car acquisition. "Current basic per diem rates of return are close to the combination of incentive and basic per diem rates of return that existed over most of the 1970-to-present period."

The ICC Bureau of Operations agreed with the proposal to institute a rulemaking, but was less eager than the OPA to see IPD eliminated. "It is not clear whether or not the availability of high-class investment company cars is actually detrimental to the overall interest of the large carriers, especially the bankrupt and financially marginal lines, in periods of car shortage," commented Bureau of Operations Director Joel Burns. He added that deterioration of freight car utilization over the last 10 to 15 years has not been limited to IPD-type cars.

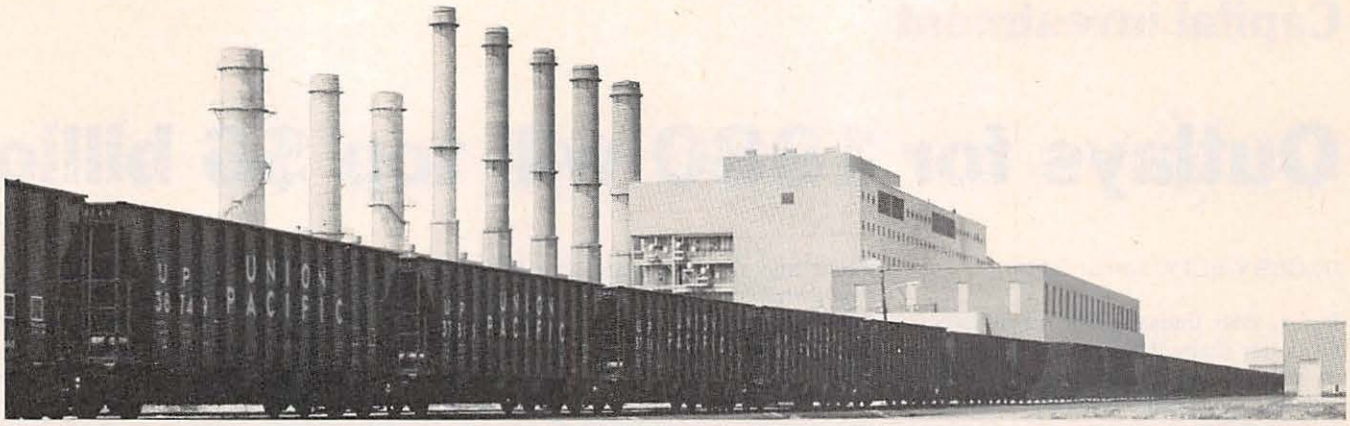
A further dissent came from the Rates Section in the Office of Proceedings, which suggested that car-leasing companies may be doing a better job than they were being given credit for, and argues that smaller incentive payments may still be necessary to encourage investment.

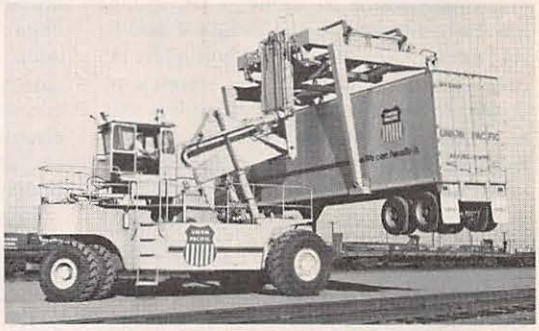
In a separate development, the Justice Department confirmed that it has instituted a preliminary antitrust investigation to determine whether railroads have conspired to undermine leasing companies that specialize in high-per diem cars. A spokesman said anticompetitive practices could be alleged if railroads are found to be returning care to their originating short lines without justification, in order to deny incentive per diem payments to the car owners.

Conrail holds off on abandonments

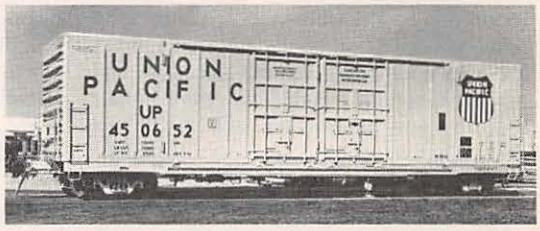
Because it expects regulatory reforms early in 1980, Conrail is extending indefinitely the one-year moratorium on major track abandonment initiatives that it announced a year ago. The moratorium was originally planned to last through calendar 1979.

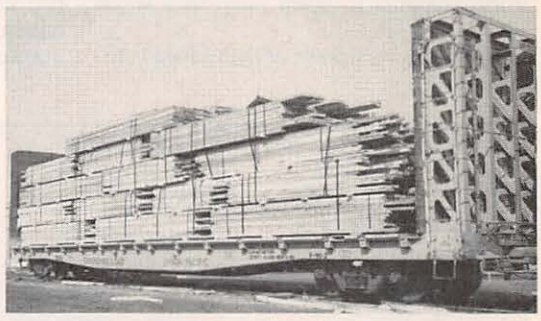
Said Conrail Chairman Edward G. Jordan: "Conrail clearly has too much unprofitable traffic on too much track. Recent reports by the United States Railway Association demonstrate that it, too, believes that Conrail needs to reduce substantially the size of its rail system. However, the existing regulations governing rate making and abondonments substitute arbitrary procedures for the market forces which should ultimately determine the level, quality, and geographic scope of rail service provided by Conrail. We are hopeful that Congress will approve a comprehensive regulatory reform bill early next year which will allow those market forces to work."





We've just placed the largest new car order in our history!





We're spending over $155 million for the purchase or construction of 3,625 new railroad cars. This brings our total new car orders for this year alone to 6,425 at a cost of nearly a quarter of a billion dollars!

At Union Pacific, dependability also means responding to increased shipper demand for special types of cars. That's why our 1979 orders include 2,250 open-top and 2,225 covered hopper cars plus hundreds of fully-enclosed auto racks, bulkhead flat cars, coal cars, piggyback trailers and boxcars.

No matter what you ship, count on Union Pacific to deliver it fast in modern equipment at competitive rates.

UNION PACIFIC

the Union Pacific railroad people.

We can handle it.

Outlays for 1980 will top $6 billion

By GUS WELTY, Senior Editor

Jan. 1, 1980, finds the railroad industry in far better shape than it was a year earlier in at least one respect: Some problems *can* be effectively attacked through liberal applications of money, and money has been applied to the industry and by the industry in amounts never seen before—private-sector money, money invested to make money. The result is that, as of Jan. 1, 1980, railroad motive power, railroad freight-carrying equipment, and railroad plant are giving the industry a greater-than-ever transportation capability from a physical and technological standpoint.

Final figures on 1979 are expected to show that about 1900 new and rebuilt locomotive units were installed during the year, the most since 1953. Final figures are expected to show that about 90,000 new and rebuilt freight cars were installed, and you have to go back to 1967 to find a higher number for cars. Final figures are expected to show that railroads, for the first time, poured $1 billion for improvements to fixed plant in a single year.

From the viewpoint of the railroad customer and the consumer who benefits from what rail transportation can provide, even better news may be still to come, because a *Railway Age* survey of major roads points to an increase approaching 15% in railroad capital spending in 1980. Expenditures for maintenance, meanwhile, can be expected to keep pace with capital investment, because the same survey finds average increases of 16.3% in maintenance-of-equipment budgets and of better than 12% in maintenance-of-way-and-structures budgets.

In terms of total dollars, a lot of year-end adding up remains to be done on 1979. But using conservative averages for locomotive and freight car purchases, it appears that the total capital investment in railroading in 1979 was well over $5.5 billion; if you use averages that some regard as more realistic, the total comes closer to $6 billion.

What happens in 1980 will be affected, of course, by what happens to the economy, by political factors that usually come into play in an election year, and by the attitudes of the outside investors who have come so strongly into the freight car market in the last several years.

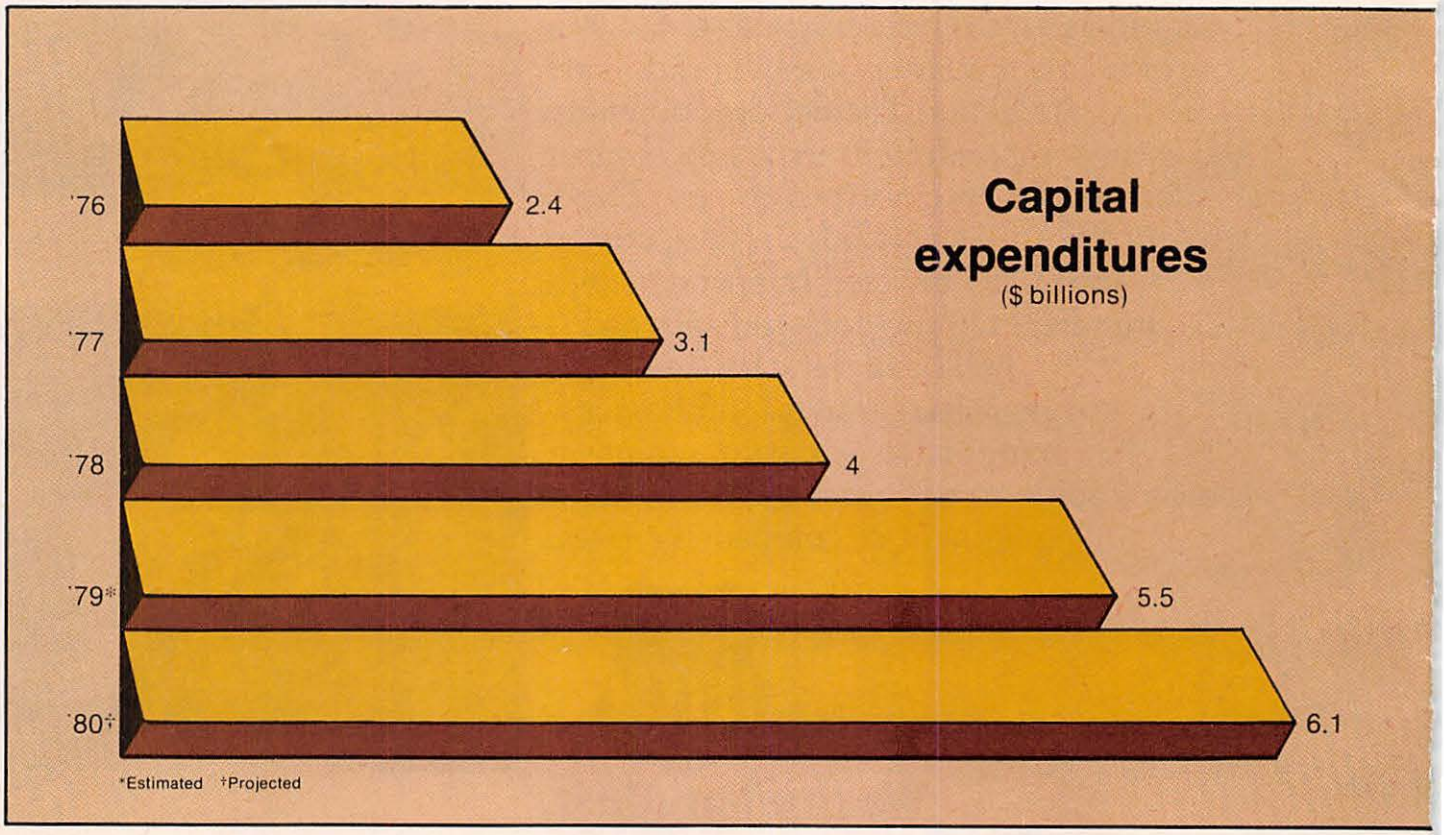
Using responses to the *Railway Age* railroad survey as a base, and assuming no real disenchantment on the part of outsiders investing in equipment, it is possible to forecast total capital expenditures in the railroad market in 1980 at a minimum of $6 billion and a maximum of more than $6.4 billion, before allowing for the inflation that will still be a factor in the new year.

● **A changing car mix.** The makeup of the market could well change, however, so far as freight cars are concerned. Through the first 10 months of 1979, these were the numbers on the freight car scene:

—Orders added up to 104,240 cars, deliveries to 72,982. The backlog, cars on order and undelivered, totaled 123,727, including 117,422 in orders placed with commercial carbuilders.

—Private buyers, including Trailer Train and Railbox, accounted for 65% of the 1979 orders, 64% of the deliveries, and 69% of the carbuilder backlog.

—Despite a strong feeling that the railroads were being flooded with more boxcars than shippers could use, order levels remained high. Through 10 months, more than 32,000 boxcars had been ordered;



deliveries amounted to a few more than 26,000 units. These were the numbers of other major car types: flatcars, 10,400 ordered, 5,600 delivered; gondolas, 9,000 ordered, 4,500 delivered; open-top hoppers, 10,800 ordered, 10,100 delivered; covered hoppers, 24,100 ordered, 15,600 delivered; and tank cars, 12,200 ordered, 7,600 delivered.

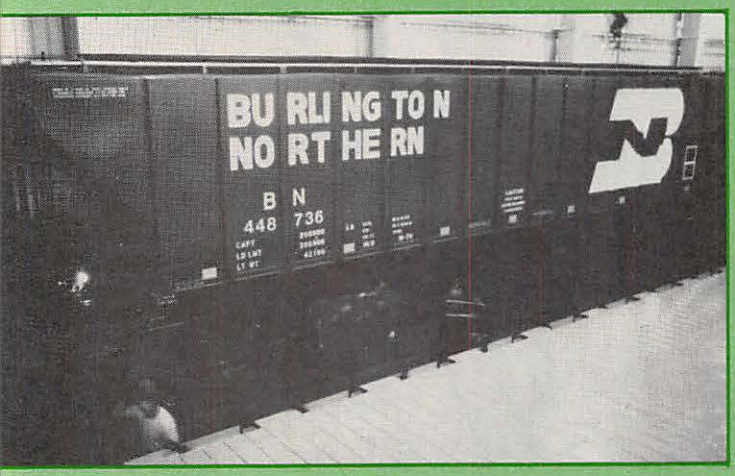
—Across the board, carbuilders were booked far into the future, some with Nov. 1 backlogs amounting to something approaching two years' production capability (as measured by delivery levels through 10 months). On deliveries, Pullman Standard was far and way the 10-month leader, with close to 18,000 cars placed in service. ACF delivered about half that number, with Bethlehem Steel, FMC, and Evans filling out the top five. On 1979 orders through 10 months, however, ACF edged out Pullman Standard (both of them over 19,000), with FMC, Bethlehem, and Greenville Steel Car coming next. On backlog, from first to fifth, it was ACF, PS, FMC, Bethlehem, and Thrall Car.

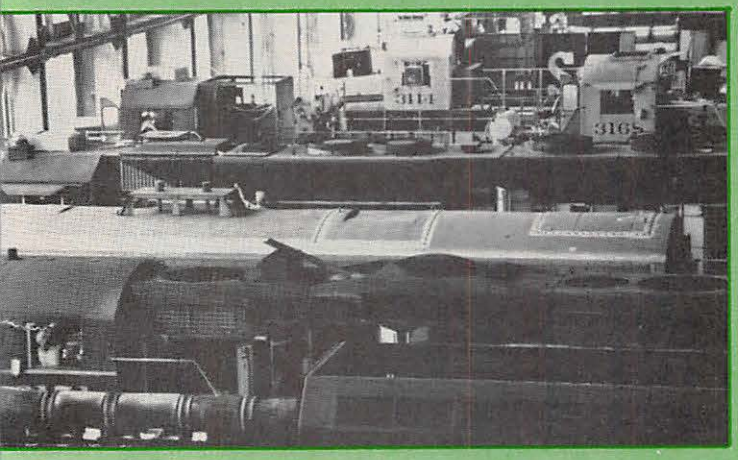
For 1980, the locomotive market should continue at about the pace of 1979, simply because railroads need the power. EMD, for example, has been producing at a rate of about 5½ units per working day, and there are no signs that any cutback is coming.

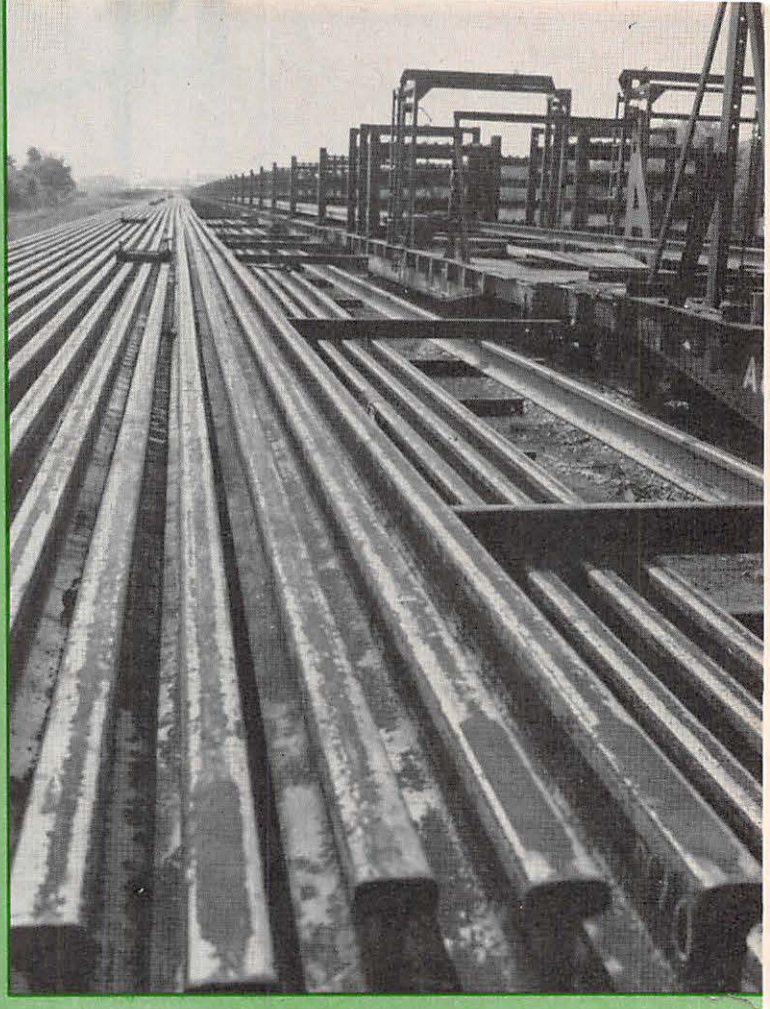
For 1980, the car market also figures to continue strong, though there are problems—problems involved with the outsiders and with what might be termed over-anticipation. By this time, it is certainly no secret that Itel (which had been putting thousands upon thousands of boxcars into service under short-line markings in order to benefit from per diem and incentive per diem income) and National Railway Utilization Corp. (with a short-line boxcar fleet that took advantage of rental income but also emphasized loaded-car utilization) ran into serious trouble, resulting in order cutbacks by both. Both companies shook up management, and both revised car acquisition plans downward—but the changes resulted in hardly a flutter in the contract carbuilder market: At least two other "outside" buyers were announcing $100-million-plus car programs for 1980; the assembly line space vacated by Itel was quickly picked up by other purchasers; and one builder, after checking with other private buyers whose orders it suspected might be soft, found that the orders were, in fact, firm.

A second potential problem could concern the backlog for coal-carrying equip-

Locomotives: A 26-year high, no signs of cutback







ment. Deliveries of open-top hopper cars in 1979 have been about equal to orders—making open tops the only car type where this situation has existed—and a fair amount of unit coal train equipment is currently in storage, in part because, apparently, car deliveries have come more on schedule than mine openings and utility plant start-ups.

On the other hand, industry observers are predicting that—1980 recession or not—rail grain and chemical traffic will lead the way, and so the market for covered hopper cars should continue at a high level. Coal traffic, in the meantime, does look relatively good for 1980 (though not nearly so good as it should be, some say), and so it would also appear that coal hopper and gondola orders may continue strong—with, it is hoped, stored equipment finally getting back into (or first going into) service.

● **Railroad spending.** Now, what are railroads saying about 1980 budgets, both capital and maintenance? The *Railway Age* survey represents a cross-section, including the big, medium-sized, and the small, and this is what it shows:

—Top numbers on railroad capital spending are those of Burlington Northern, with 1980 programs for BN and its rail subsidiaries pegged at $526.9 million, down by about $700,000 from estimated '79 levels. Railroad expenditures for equipment will be up by $20.4 million, however, and there will be a significant increase in budgeted equipment maintenance expense, from $587 million this year to $695 million in 1980. BN's equipment acquisition program for '80: 280 locomotive units and 2,461 freight cars, plus 150 autoracks and 500 piggyback trailers.

—Family Lines checks in with a capital program adding up to $464 million, up from $315 million in 1979. Equipment spending will go from $245 million to $377 million, with 115 new and 58 rebuilt locomotives on the list along with 5,000 new and 2,300 rebuilt freight cars. Fixed-plant expenditures will climb from $70 million to $87 million, for such projects as installation of microwave between Atlanta and Waycross, Ga., construction of a freight car running-repair facility at Waycross and a car repair and locomotive-servicing facility at Winston, Fla., yard expansion at Ravenna, Ky., the double-tracking of certain sections of line in eastern Kentucky, and acquisition of shop machinery for South Louisville shops. For Family Lines, 1980 will bring acquisition of fewer locomotives than in '79, but it will also bring a sharp increase in freight car acquisitions (from 2,100 to 5,000) and a jump in rebuilding of both power and cars.

—In '79, Southern Pacific almost doubled its previous high for railroad capital spending, with expenditures that topped $450 million. Of that total, about $350 million went for new motive power and freight equipment, with the rest invested in modification and rebuilding of equipment and in improvements to track, roadbed, signals, and other facilities. In 1980, SP is figuring on spending levels that could equal those of '79, depending upon the state of the economy, and probably budgeted in similar fashion between equipment and plant. At this point, SP does see an increase in the number of locomotives to be acquired and an increase in caboose purchases, but a cutback in freight car acquisitions. Fixed-plant improvements will include installation of additional ctc, along with improvements in intermodal and automobile-handling facilities.

—Santa Fe is going to be up in spending for both equipment and plant, with the 1980 budget calling for total expenditures of $371 million ($277 million for equipment and $94 million for plant), compared with an estimated $303 million in '79 ($229 million for equipment and $74 million for plant). Locomotive acquisitions will be about the same, with 140 units scheduled for '80 delivery, but freight car acquisitions will be up substantially, from 1,250 to 2,075. Included in 1980 installations will be four more trainsets of Ten-Pack piggyback equipment, following the suc-

The 1980 shopping list: Equipment, $5 billion; fixed plant, $1 billion plus

cessful revenue service use of the fuel-saving, skeleton-type equipment. In addition, Santa Fe will continue its rebuilding programs (85 locomotives and 638 cars), acquire 1,290 trailers and lease 1,500 others, and install close to 450 miles of new and reconditioned welded rail.

—Union Pacific capital spending will go up from $310 million in '79 to $367 million in 1980, with expenditures for equipment climbing from $220 million to $284 million and outlays for fixed plant dropping slightly from $90 million to $83 million. In '80, UP will be getting fewer locomotives (150, down from 180 in 1979) but freight car installations will go up from 2,126 to 3,580. Improvements to fixed plant will include construction of about seven miles of third main track near Lookout, Wy., construction of approximately 11 miles of additional sidings and second main track on the Kansas Division, construction of a new running track and a new TOFC facility near Salt Lake City, and improvements to a car repair facility at Omaha; these projects alone account for expenditures of about $16.8 million. On the maintenance side, budgets for '80 are up substantially, from $366 million to $439 million in 1980 for m/e and from $278 million to $330 million for m/w&s.

—Missouri Pacific, now, shows a down-figure on capital spending for the new year, but that could be misleading, because MoPac has often come along with increases during a year. In any event, what MP plans now is an expenditure of $247 million (down from $255,173,000 in 1979), with a drop in equipment spending from about $214 million to $167 million and an increase in fixed-plant expenditures from a bit more than $41 million to $80 million. MP will be acquiring a few more locomotives in '80 (140 vs 130), but its car acquisitions will be down (from 3,200 to 2,077). Property improvements will be impressive, including installation of almost 205 miles of new 136-pound welded rail, installation of close to 240 miles of 112- and 115-pound relay welded rail, improvement of intermodal and auto-handling facilities and a number of bridge improvements and siding extensions, as well as an eight-mile installation of second-main track in the Houston area.

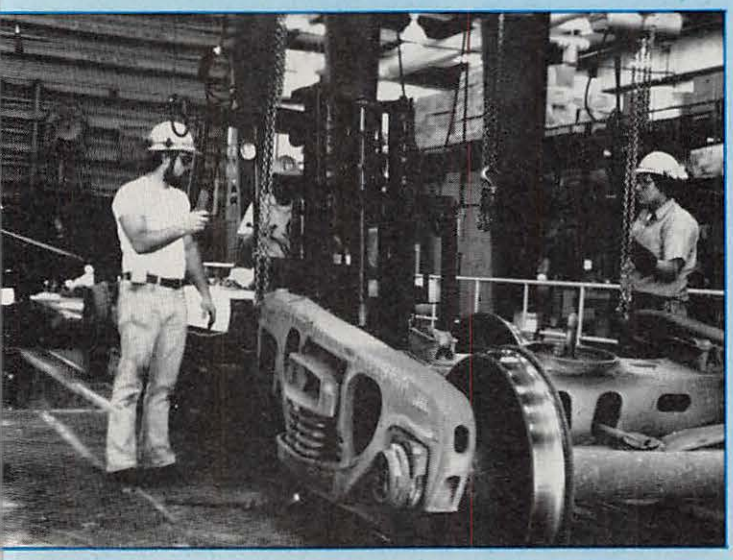
—Southern's totals are a bit harder to figure, but by the time all the numbers are added up, Southern will need no apologies. Its 1979 capital spending was pegged at $285 million, a record high, and equipment expenditures alone for 1980 will run to about $214 million, for 76 locomotives, 3,225 freight cars, and 1,200 trailers.

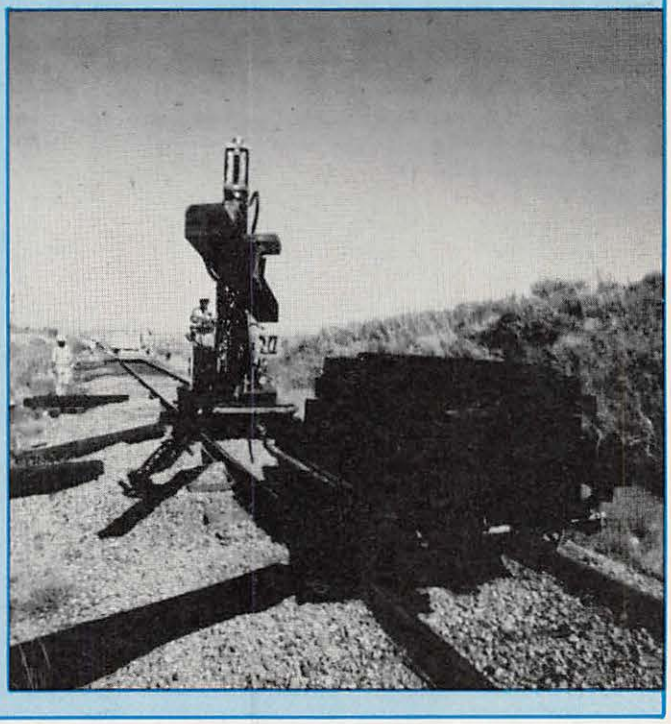
—In the totals, Chicago & North Western and Illinois Central Gulf also come in at levels above $200 million. Without giving details, ICG has said that 1980 capital spending will run about 20% above 1979's $225 million. North Western is looking at an increase in expenditures from $105.2 million in '79 to $200.9 million in 1980. For C&NW, this translates into an increase in equipment spending from $49,352,000 to $106,183,000, with locomotive acquisitions going up from 65 to 80 units, freight cars from 740 to 1,550 units; it also means a boost in fixed-property spending from less than $56 million to more than $94 million, with emphasis on the continuing rehabilitation and improvement of the Chicago-Fremont, Neb., line and improvements at Proviso Yard west of Chicago. Maintenance? North Western is also going up there, with spending for both m/e and m/w&s budgeted to climb from around $100 million in '79 to $115 million plus.

—Chessie System plans a small boost in capital budgets, from $170 million in '79 to $180 million, but a bigger jump in maintenance spending, from $285 million to $340 million on m/e and from$270 million to $320 million in m/w&s. Among Chessie's major projects: continuation of work on Queensgate Yard at Cincinnati, now estimated to cost $60 million.

—Norfolk & Western, coming off the strike by the Brotherhood of Railway and Airline Clerks and all its related problems in 1978, put close to $115.6 million into capital improvements in'79 and is budget-

Maintenance budgets: The trend is also up





ing for $162.9 million in 1980. Locomotive acquisitions will be down, from 45 units to 25, but freight car installations will be up, from a couple hundred to 1,644, and included in $60.5 million in fixed-plant improvements will be better than $9.8 million for rail/ballast programs, upwards of $4.4 million for construction of locomotive inspection and repair facilities at Bellevue, Ohio, and about $3.5 million for purchase of roadway machinery. On maintenance budgets, NW figures to go up from $172.7 million to $188.7 million on m/e and from $162.1 million to $185.5 million on m/w&s.

—Frisco, which by this time next year could be part of Burlington Northern, isn't about to let its proud property decline. Fixed-plant spending will stay at about 1979 levels, $16 million, but equipment expenditures are budgeted to climb from $27.2 million to $37 million, with Frisco planning to acquire fewer locomotives but more freight cars. Maintenance will also run higher, going from $81 million to $89 million on equipment and from $69 million to $75 million on fixed plant.

—Among smaller roads, there are ups and downs. Rio Grande, for example, doesn't have a car program for 1980 (it acquired 1,110 cars in '79), but it's going to get 16 diesel-electric units, up from zero last year, and its maintenance programs on both equipment and plant are going to show increases. Neighboring Western Pacific is going to be down somewhat on plant spending but up on equipment, with a total budget on the capital side of $22.7 million as compared with $19.4 in 1979. Katy's total capital budget is way down, but it's going to be getting a couple more locomotives than it did in '79, and its property-improvement figure will be up sharply (from $5.9 million to more than $9.3 million). There is perhaps a misleading factor in its reduction in car acquisitions, because Katy is in the process of entering into several split-lease arrangements that will make better use of equipment and still provide adequate service to customers whose needs are seasonal.

—Two major Class I railroads are missing from that long list, Conrail and Amtrak. Each has a hook to the federal government, and about the best that can be said at this point is that Conrail has 126 locomotives on order for 1980 delivery, will start building 2,000 gondolas in CR shops next spring, and would like to get more cars if financing can be arranged. Amtrak shows capital budget authorizations of $203 million for FY 1980, $244 million for FY 1981, and $254 million for FY 1982, with most of the money destined to go for new equipment; there is also the Northeast Corridor improvement project, with an estimated $400 million to be spent in 1980.

● **A recession-proof market?** What all of this adds up to is the existence of a rather remarkable marketplace—one that should be encouraging to all concerned, at least through 1980 and into 1981.

There will be a few soft spots. Automobile traffic has been off sharply, with forecasts now indicating that it may be mid-1980 before the auto industry bounces back. TOFC/COFC would be hurt (though probably to a lesser extent than in past situations) in the event of a deep recession. Coal development is not coming along as rapidly as had been expected. And all of these factors could affect both the size and the timing of some new equipment programs. So, too, could future developments in such areas as per diem, incentive per diem, and even basic car service policies and practices.

In addition, there's a feeling that a mild adjustment downward in carbuilding rates might not be all bad, especially if it would buy time for domestic producers of scarce components to complete planned plant expansions and thus ease the pressure on builders to go overseas and pay more.

Overall, however, the market can be expected to remain strong. Despite general agreement that at least the first half of 1980 will be no bargain, with about 4% drop in carloadings being predicted, railroads are in fact committed to increases in both capital and maintenance budgets for the year, increases over and above what could be accounted for by inflation. The industry's self-improvement is spreading its waves throughout the supply industry, to the point where, with many builders, if you ordered a freight car today, you would get delivery in '81, early '81 if you are especially lucky; or to look at it another way, consider that at least 10 major carbuilders, all working at or near capacity over the first 10 months of 1979, went into November with more cars backlogged than they had been able to deliver this year.

So don't ignore the soft spots coming up in '80—but don't overestimate them either, because railroad improvement programs today are perhaps more solidly founded than they have ever been.■

THE RAILROADS CAN'T RUN WITHOUT YOUR HELP AND WHAT YOU'RE ABOUT TO SEE CAN'T EITHER.

EVERYTHING YOU THINK YOU KNOW ABOUT THE RAILROADS IS PROBABLY WRONG.

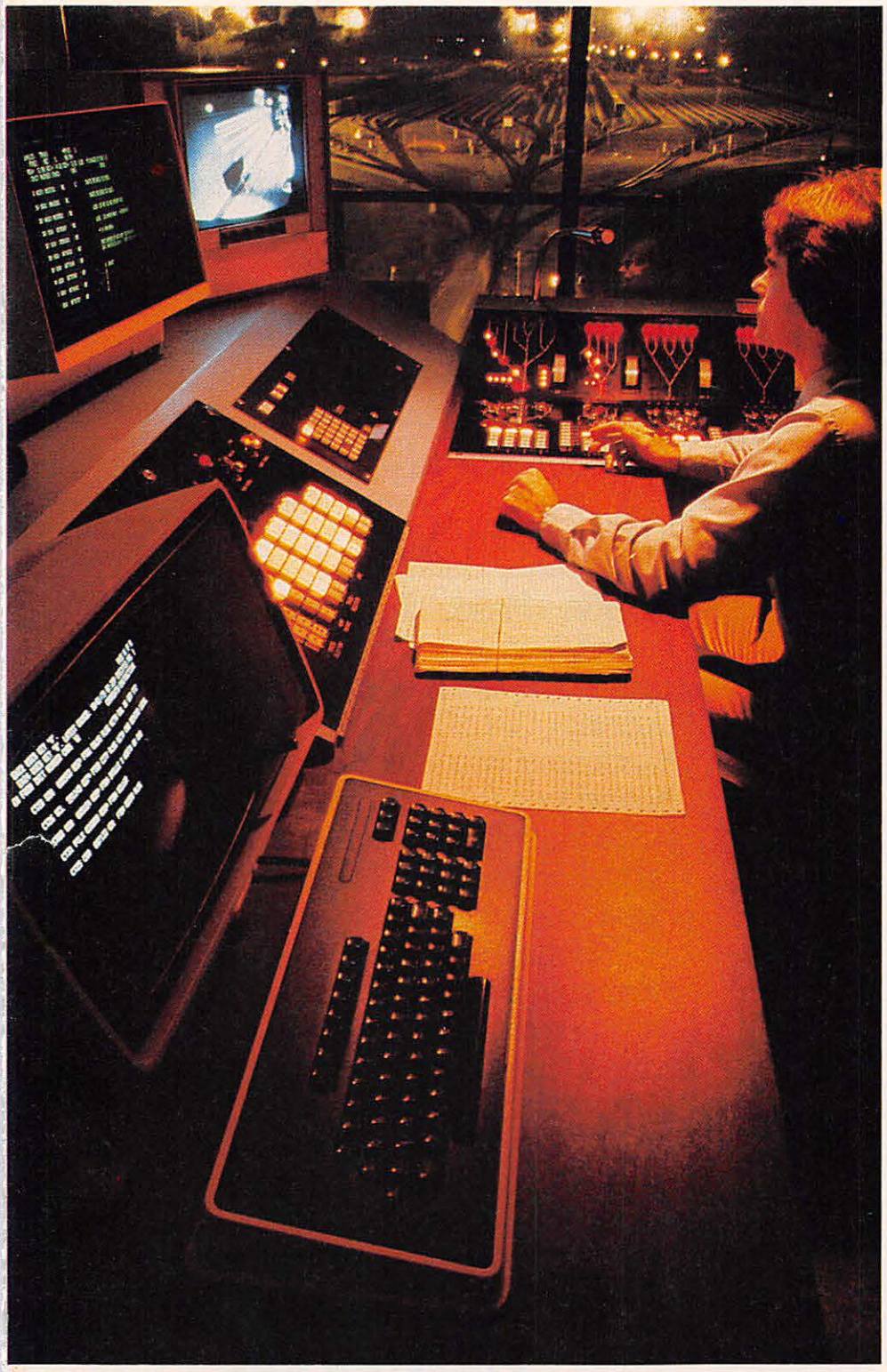
When you think of railroads, you probably think of trains in "the good old days" – chugging engines, lonesome whistles and the rhythmic "clickety-clack" of steel wheels on steel rails.

And perhaps since those "good old days" are dead, you think the railroads are dying, too.

You're wrong.

AN INDUSTRY THAT MOVES 36% OF THE NATION'S INTER-CITY FREIGHT MUST BE ALIVE AND KICKING

Passengers never accounted for over 25% of revenue even in the heyday of rail travel. The big job of the railroads has always been hauling freight. And on this count, the railroads are irreplaceable.



For America's railroads move nearly as much inter-city freight as all the trucks, barges and airplanes combined.

MODERN RAILROADS ARE AS DIFFERENT FROM THOSE OF THE PAST AS SUPERSONIC JETS ARE FROM PROP PLANES.

The railroads still use locomotives to pull cars over a track just as they did 30 years ago.

But the resemblance stops right there.

Today's railroads use new technology, new materials, new power sources and specialized equipment to meet special shipping needs.

The result is the ability to carry more freight tonnage than ever before, using only two-thirds as many trains.

And that's an economy that finds its way straight to the consumer's pocketbook.

AN INDUSTRY THAT USES ¼ THE FUEL OF BIG TRUCKS IS A FAR CRY FROM INEFFICIENT.

In a nation deeply concerned about the shortage of energy, fuel efficiency is of critical significance.

And it's one reason why America's railroads, with their much smaller expenditure of energy, will become increasingly important in the years ahead.

Indeed, with this country's freight load expected to double by the year 2000, the future of the nation holds great promise for the railroads. And the future of America's railroads holds great promise for the nation.

This message is from the American Railroad Foundation, an organization comprised of companies involved in the supply and service segment of the railroad industry.

AMERICAN RAILROAD FOUNDATION

WE NEED TO CHANGE THE WAY PEOPLE THINK ABOUT THE RAILROADS.

It's essential. Because what people think, according to public opinion polls, is that America's railroads are poorly managed, inefficient, outdated relics.

Nothing could be further from the truth. The problem is to convince the public of that. At a time when energy-efficiency is important, environmental concerns are paramount and America's freight load is constantly growing, the railroads should be flourishing, not struggling to survive. But they will not flourish until the public understands and appreciates the contributions made by America's modern railroads.

THE ANSWER IS THE AMERICAN RAILROAD FOUNDATION.

The Foundation is a nonprofit organization open to any firms or individuals engaged in the manufacture or sale of railroad equipment or services. Its purpose is to help influence public opinion through communications programs and advertisements such as the one on the two preceding pages.

The Foundation represents an opportunity for those of us who know the facts about our railroads to participate in the effort to change their image.

WHY CAN'T RPI OR AAR DO THE JOB?

The Railway Progress Institute supports the efforts of the Foundation, but its primary purpose is to represent the supply industry in governmental affairs.

As for the Association of American Railroads, its advertising program is effective, but limited. More impact is needed to get the message across. While the efforts of the Foundation could never do the job alone, as a supplement to the AAR's ongoing program it could reach more people more often with the truth about the railroads.

FOUNDATION PROGRAMS WILL BE FUNDED AND CONTROLLED BY SUPPLIERS.

Two classes of membership in the Foundation are offered. Active Members are those pledging annual contributions of $15,000 or more, and Sustaining Members are those contributing less. All major business of the Foundation is subject to the final approval of its Board of Directors, which has a solid majority of suppliers.

For further information about the American Railroad Foundation, its membership, its activities and its goals, write to the Foundation at the American Railroads Building, Washington, D.C. 20036. Do it today. Because a healthy and prosperous railroad industry is a healthy customer.

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acf **Amcar Division**

MEMBER RPI

Circle 9 on Reader Service Card

Late-'79 slump will extend well into

The railroads are going to find 1979 a tough act to follow. Freight traffic was at an all-time high—900 billion ton-miles, by the AAR's late-December estimate, up 4.9% from 1978. Coal haulage was at the highest level in 25 years. Grain movement was the heaviest in history. Piggyback was at a record level for the third consecutive year.

But late in the year there were increasing signs of traffic erosion, and the first half of 1980, at least, will see a general decline in railroad business compared with year-earlier levels. During the first 48 weeks of 1979, nine of the 22 railroad commodity groups showed increases; three of the big ones—grain, coal, and chemicals—were especially strong. Motor vehicle haulage, down 10.1% for the 48-week period, was the big loser. But during the last nine of those 48 weeks, only three commodity groups showed increases, and of these only grain remained strong. Meanwhile, the decline in motor vehicle traffic had sharply accelerated.

"Many people," observed one railroad officer, "have been wondering when we were going to see the recession that the economists have been predicting. Well, it's now becoming visible in the carloadings."

Right now, authoritative though unofficial industry forecasts call for a 5% slippage in carloading during the January-June period; the decline in ton-miles will be less severe due to continued heavy traffic in long-haul commodities.

What happens in the second half will depend on how the national economy behaves—and many factors, including uncertainty over the availability and price of oil in the international market, make that behavior pattern a difficult one to trace this far ahead with any degree of confidence.

Railroads in the West and the South that are big in coal, grain, and chemicals traffic will be least affected by the slump—though even the most optimistic now see only a "flat" first half. Railroads in the East, as is nearly always the case, will be more severely hurt, particularly Conrail, whose first-quarter 1980 traffic prospects are sufficiently bleak that the United States Railway Association has decided to increase the railroad's injection of federal funds for that period.

● **What shippers are saying.** While the performance of the national economy will be the most important determinant of traffic levels in 1980, it won't be the only one, as shippers responding to *Railway Age's* December traffic poll emphasize. Continued service and equipment problems, many of them are saying, could result in a further shift of traffic from railroads to motor carriers.

One such warning comes from Robert W. Pettigrew, general traffic manager for the Hershey Chocolate Co. at Hershey, Pa. He anticipates that Hershey's traffic will increase by about 12% in 1980, but the rail increase will be only 3% to 5% because, says Pettigrew, "the majority of carriers we use still need to improve operating efficiency in order to provide faster and more consistent transit time."

Similarly, J. D. Robins, director of traffic for the Caterpillar Tractor Co., Peoria, Ill., looks for a 3% to 5% increase in traffic but no increase in rail usage. For railroads to increase their share of Caterpillar's business, says Robins, they must improve service and equipment reliability and maintain competitive pricing with motor carriers. "I'm not down on the railroads, just disappointed," says Robins. "They can certainly start making some improvements on their own, but the rate of improvement so far has been too slow. We're hoping that the rail industry will step forward, because we're all energy conscious right now. If the railroads can improve their lot, they'll be improving the nation's as well. There are many areas where they're not really out of the ballpark, they're just deficient. It's a matter of tending to the business they have."

Eugene D. Smith, manager-corporate traffic for Mueller Brass Co. at Port Huron, Mich., forecasts that his own company's traffic needs will remain level with those of 1979 but he plans to ship about 10% less by rail in 1980. "The cost of inventory is too high to absorb lengthy transit times," he says.

John R. Staley, general traffic manager, Seaboard Allied Milling Corp., Kansas City, expects a 10% increase in shipments in 1980—and at the same time a 10% drop in rail use. To reverse that trend, he says, railroads "must improve equipment supply and, above all, substantially improve service reliability."

Traffic Manager N. C. Kunzmann of Georgia-Pacific Corp., Bellingham, Wash., predicts a drop in his company's use of railroads because "service is terrible." Citing longer transit times from Bellingham to Chicago and Texas, Kunsmann says, "Really, the railroad situation now is worse than it was a year ago." He adds: "We're still in an expansion, and the opportunity is there for the railroads."

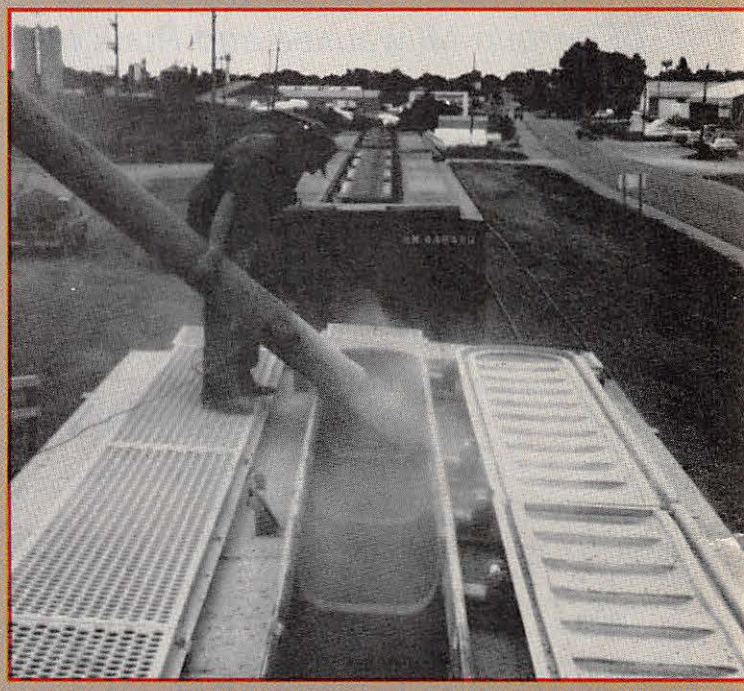
W. R. Grace & Co. will probably use less rail service in 1980, due to a lack of equipment, says L. L. Clabaugh, manager-transportation, distribution, and traffic at Baltimore. "Railroads must ac-

Carloadings: The minuses multiply

Commodity	JANUARY 1 to Dec. 1, 1979	% change from 1978	OCTOBER 1 to Dec. 1, 1979	% change from 1978
Grain	1,307,277	+ 5.3	290,586	+15.5
Farm products	205,644	− 7.1	53,675	−16.9
Metallic ores	1,646,104	+ 3.6	304,532	− 4.3
Coal	4,846,953	+19.8	1,001,985	+ 0.8
Crushed stone, gravel & sand	803,826	−10.3	150,941	−18.0
Nonmetallic minerals	726,993	+ 2.4	140,135	+ 2.2
Grain mill products	848,174	− 5.7	162,716	− 7.2
Food and kindred products	882,773	− 4.0	168,604	− 6.5
Primary forest products	980,649	− 3.0	186,356	− 4.4
Lumber & wood products (except furniture)	559,313	− 7.4	96,236	−14.4
Pulp, paper & allied products	1,018,006	—	192,750	—
Chemicals & allied products	1,379,440	+ 3.6	250,059	− 2.4
Petroleum products	311,451	− 6.3	53,848	−12.0
Stone, clay & glass products	882,181	− 1.4	165,248	− 7.0
Coke	337,011	− 2.5	55,425	−16.7
Metals & products	921,427	+ 3.5	160,078	− 6.8
Motor vehicles & equipment	1,056,433	−10.1	184,714	−23.0
Waste & scrap materials	666,426	+ 1.0	119,862	− 5.3
Forwarder & shipping assn. traffic	598,423	+ 3.4	111,355	− 3.2
All other carloads	2,185,722	− 2.1	403,607	− 5.8
LCL traffic	19,959	−17.2	3,480	−24.1
Total cars loaded	**22,184,185**	**+ 2.6**	**4,256,189**	**− 4.4**

the new year

WEAK: Auto traffic has been running 23% below year-ago levels, and no recovery is expected before mid-1980, if then.



STRONG: Grain moved at record levels in 1979, and will continue to show strength in the new year.

cumulate a reserve fleet of special equipment to facilitate shipping during peak periods of car usage such as harvest time for grain," says Clabaugh. "They can't expect us to start using the railroads as our main mode of transportation and then pull out the cars to accommodate other industries."

D. L. Johnson, director-general traffic and distribution, Emerson Electric, St. Louis, sees little or no change in his company's traffic requirements in 1980, but he believes that there will be some decline in the amount shipped by rail. "I'm not convinced," says Johnson, "that the railroads want to increase their market share. I think they want to increase only those areas that result in immediate profit improvement. This is not necessarily bad, but it does seem to take them away from long-term penetration planning for new markets."

Altogether, more than 80% of the shippers participating in the December poll complained about railroad service levels, though only about 25% said they would take traffic away from the railroads for service or other reasons.

Others expect the railroad share of their business to increase—some because they have no alternative. One of these is ICI Americas, Inc., whose traffic manager, Dwight Long, says the rail share of his company's traffic will increase due to expansion of bulk chemcial sales. The rail share could be even higher, he says, with improved service reliability.

Many of those who expect their rail shipments to be up qualify their forecasts with a number of "ifs" relating to service and equipment. One of these is American Crystal Sugar, Moorhead, Tenn., which expects a 15% drop in traffic but with the rail share holding steady and possibly increasing. To win a bigger share, says R. T. Mozinski, traffic manager, railroads must improve service to key marketing areas, offer better rates on high-volume shipments (especially inbound raw materials), and compete for intermodal traffic by coming up with improved Plan II service.

Lloyd Philips, traffic manager, Riviana Foods, Houston, expects business to be as good in 1980 as in 1979 and possibly better. "Service improvement and moderate rate increases will at least hold the business and could increase it," says Philips, but he adds: "Our traffic is truck competitive, and if rates increase too much, we can swing to trucks."

R. A. Propf, director of transportation and distribution for Geo. A. Hormel & Co., Austin, Minn., hits hard at the self-improvement theme, suggesting that railroads "quit blaming their problems on regulation and concentrate on improving labor productivity and attitude, in order to produce a dependable service at a competitive cost."

Harold Pockrose, director of transportation for David J. Joseph Co., Cincinnati, hopes to maintain strong use of rail service in 1980 as his company's own business goes into an anticipated decline—provided there is a better supply of acceptable equipment and rate competitiveness.

A. A. Jura, manager-group traffic, Admiral Division of Magic Chef, Des Plaines, Ill., sees his company's 1980 rail use at least equalling and perhaps slightly exceeding that of 1979—provided the current spread between carload and trailerload costs is maintained.

One strong supporter of railroads responding to the December poll is J. Robert Morton, corporate vice president of Combustion Engineering, Stamford, Conn. He says Combustion's use of rail service will be up slightly in 1980, but adds: "The railroads must come to grips with their problem of time in transit, which continues to lengthen. They must realize that their time-worn statement that shippers use rail equipment for storage is no longer valid. It is the railroads themselves that are using equipment for storage, because of their inability to move the cars."■

In the midwestern turmoil, a bold bid

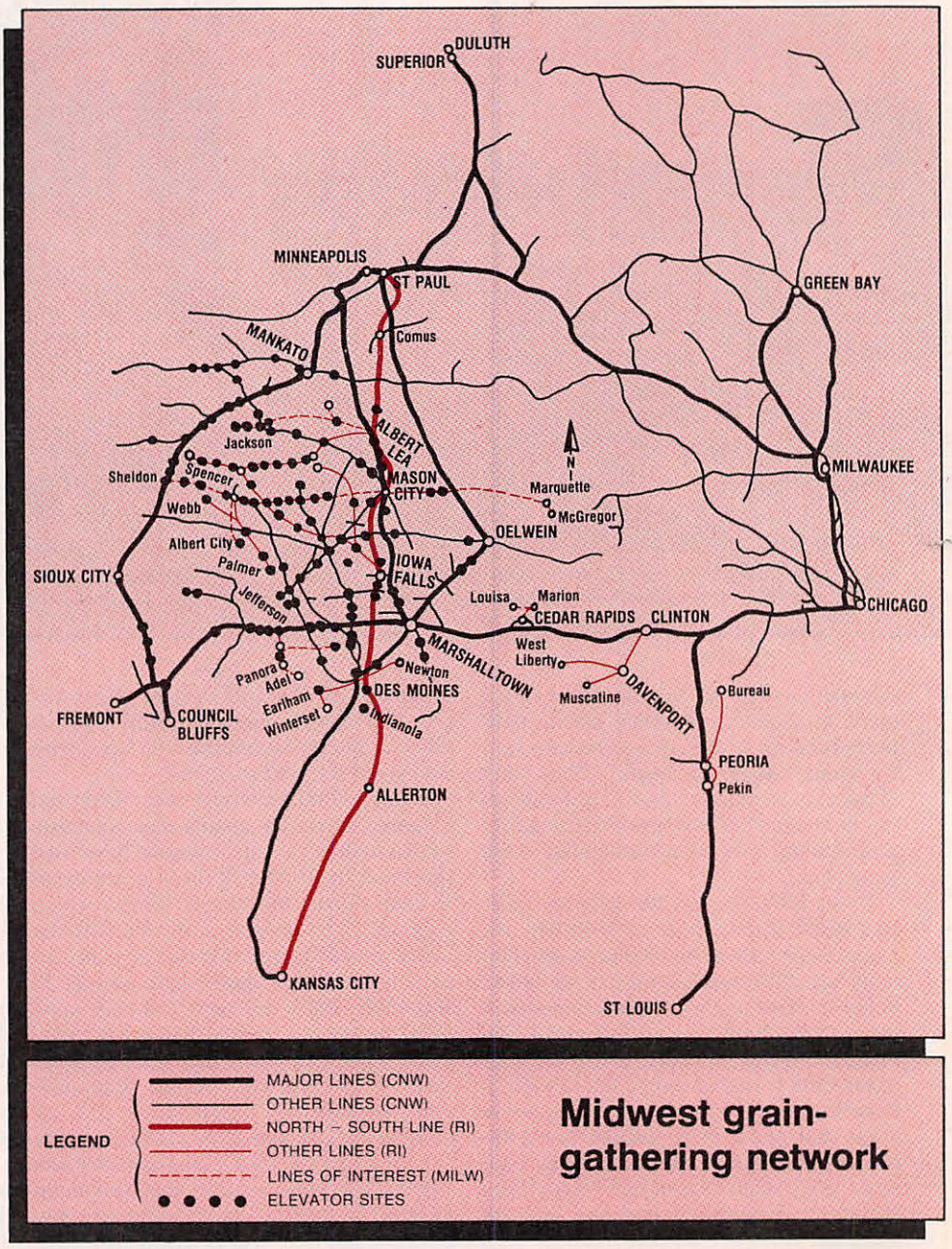
Grain-gathering system proposed by C&NW contemplates purchase of certain Milwaukee and Rock Island lines in Iowa and Minnesota

The Midwest rail network is a maze, and restructuring is still a mystery, and in the West as a whole railroads are battling railroads with a verve that would recall the battling days of the late 1800s—except that the current battlers might more correctly be called survival barons rather than robber barons.

Item: Rock Island, in bankruptcy since spring of 1975, missed one more deadline for filing a reorganization plan, while a number of other roads were expressing interest in acquiring pieces of RI. Roads with a "potential interest" were listed by DOT as follows: Southern Pacific; Rio Grande; Santa Fe; Burlington Northern; Kansas City Southern; Katy; Union Pacific; Frisco; Missouri Pacific; Chicago & North Western; Illinois Central Gulf; Milwaukee Road (itself in bankruptcy); Toledo, Peoria & Western; and Peoria & Pekin Union. Meanwhile, SP, which had long ago applied for Interstate Commerce Commission permission to acquire the Rock's line between eastern New Mexico and St. Louis via Kansas City, got ICC approval for temporary authority to operate the line (along with RI's Memphis-Fordyce, Ark., route), and Santa Fe promptly went to court seeking a stay order.

Item: Milwaukee Road, in bankruptcy proceedings only since late 1978, had its preliminary reorganization plan on file with the court, a plan looking toward a much-scaled-down system known as Milwaukee II. In line with the aims of this plan, Milwaukee began the process of selling off bits and pieces of its lines in the Northwest to various buyers, including UP and BN. But under the recently enacted Milwaukee Railroad Restructuring Act, Milwaukee is barred from giving clear title to lines for sale, even if all necessary approvals are secured. In that same legislation, Congress allowed for the possibility of a new, employee and/or shipper entity taking Milwaukee over. At first, the timetable and the requirements imposed in the legislation seemed too much for any employee-shipper combine to meet—but then there were other scenarios posited by some in which such a takeover scheme might be made to fly for political reasons even if it lacked proof of economic rationality.

Item: Chicago & North Western began promoting its own plan for taking over certain Rock Island and Milwaukee Road lines in Iowa and southern Minnesota in order to create a new rail grain-gathering and transportation system that would include RI's main north-south line between the Twin Cities and Kansas City and selected other Rock and Milwaukee Road lines. North Western had a case it regarded as persuasive, but it was running into some opposition in Iowa from those who feared that the proposal would create what would amount to a rail monopoly. North Western's response was that there is no transportation monopoly (not with the volume of truck competition that exists) and that a basic problem in the region has been that there's simply too much



by C&NW

railroad plant (and, therefore, competition) to be supported by available traffic.

Item: While North Western was proposing (in effect) something close to a monopoly on rail grain-gathering and movement in Iowa and southern Minnesota, farther west it was taking an opposite tack, fighting hard to stay alive with its bid to be a major carrier of coal originating in the Powder River Basin of Wyoming. Here, C&NW (supported by UP) was mounting a pro-competition argument, and BN was the target. Here, C&NW had ICC approval to be a participant, with BN, in construction of what has become known as the Orin-Gillette line, 116 miles (in all) of new railroad built at a cost of about $110 million, a line that links BN's northern and central main lines. The problem has been that North Western has not been able to come up with the money to pay for its share of the costs involved, either privately or with federal assistance. Twice, BN extended—voluntarily, it notes—payment deadlines, and still C&NW was unable to come up with the money; the latest "deadline" expired Nov. 30, and BN took action to deal North Western out.

North Western, however, had made its own changes in plans, going from a proposal to secure federal aid for upgrading its own line across Nebraska to a more modest plan (in terms of federal help required), under which C&NW would upgrade a lot less track and build a connector line joining it with Union Pacific, which already has a first-class east-west line south of the coal fields. BN charges that ICC did not base its original decision, the one allowing C&NW in, on competitive factors, and it points out (with FRA support, in effect) that with a softening in demand for western coal there is already more than enough transportation capacity to move the coal. ICC, however, thus far seems to be siding with North Western, saying that its original order providing for joint BN-C&NW participation in the new line in Wyoming can't be ignored just because North Western has not been able to come up with the dollars it owes BN.

● **But as for grain...** North Western's problems with its participation in the coal line, however, are an old story. Its proposal for a C&NW-based grain transportation system is new, at least in the specific form now being promoted with grain shippers.

Rather clearly, North Western fears the sort of thinking that says that if Rock Island, in particular, is to be broken up, then the solution will be to bring in a new carrier to take over RI lines in Iowa. C&NW is charging that the Iowa DOT "Courts Kansas City Southern," which has in fact indicated an interest in acquiring Rock's line between Kansas City and the Twin Cities along with Iowa grain lines. What North Western is telling shippers is that "the attempt to bring a foreign railroad corporation into Iowa and Minnesota is an ill-fated move to revive the 19th century and to replicate a recent history that has brought near financial turmoil to the grain economies of Iowa and Minnesota."

The crisis "that we deal with today," C&NW is saying, "is the result of too many railroad corporations seeking to serve a market that cannot support such a diversity of corporate entities. Clearly, bringing railroads new to the area into Iowa and Minnesota will only exacerbate that root cause. The troubled Midwest railroads have not been able, through the traffic densities produced in the grain-shipping areas of Iowa and Minnesota, to generate enough revenues to justify massive expenditures for track, equipment, and maintenance—and it will take massive expenditures to give the Midwest the superrailroad to the Gulf that it deserves."

To North Western people, "It's clear that such a system can only be achieved by taking the viable elements of both the Milwaukee and the Rock Island, joining them with the stronger C&NW and melding the resulting system into a single, strong railroad."

Creation of a coordinated arterial and branch-line gathering system consisting of elements of RI and Milwaukee "operated by C&NW in conjunction with its present grain-gathering network would permit efficiencies of operation which have not been possible with separate railroads operating independent, lower-density gathering systems. These operating efficiencies would in turn reduce operating costs of the network and, most important...afford a rail distribution network far superior to the existing system, with faster car turns and the capacity to haul far more grain as well as general commodities."

● **Justifying a commitment.** C&NW says that the railroad it envisions "will reasonably support the movement of grain in hitherto unprecedented densities. This heavier traffic will justify our commitment to the building of a high-speed trunk-line railroad in the corridor between the Twin Cities and Kansas City to gather in the grain from feeder lines on the new system and move it quickly to the Twin Cities, Duluth, St. Louis, Chicago, Milwaukee, or Kansas City....Only by using the North Western's present system and its traffic volumes in combination with segments of the Rock and the Milwaukee can this new, improved system become a reality. A new railroad entrant can only inherit what the Rock had—obviously not enough revenue-generating capacity to support the substantial capital improvements required for a new system. In short, what Iowa needs can only be done with C&NW's traffic densities and little in the way of transportation improvement can be done without it."

As for the "monopoly" question, C&NW argues that there are a number of situations in which wealthier railroads have predominant positions in whole areas "and there is scarcely a complaint to be heard. The difference lies in the prosperity and, thereby, the physical condition of the railroads and their ability to give service. On the other hand, take a market area that can support one railroad and divide it up among three and you will have—from a revenue standpoint and in that area, at least—three relatively poor railroads giving necessarily poor service. Turn that same market area over to one railroad, and you will see a rapid improvement in service and an economically healthier railroad."

● **Dollars and questions.** Among the things North Western does not say, at least in its formal presentation of its plan, is how much it will be willing to pay for the lines it wants, how it would finance those purchases, how much it would cost to rehabilitate the acquired Rock and Milwaukee lines, and how that rehab work would be financed. For these and other reasons, some might regard North Western's proposal as a bold one—making, in the basic analysis, a lot of sense—but one that has reasonable doubts connected to it, especially in view of C&NW's inability still to get financing for its share of the Wyoming coal line. On the other hand, North Western has been the largest single beneficiary of federal financial assistance under the 4R Act, and it has made good use of the money by pouring much of it into creation of a high-speed route between Chicago and a UP connection at Fremont, Neb. While North Western has been running into deficit problems this year—due in good part to a horrendous, winter expense-related first quarter—government just could figure that its best chance of (1) making sense out of the Midwest and (2) getting back the money already involved with C&NW lies with further backing of C&NW.■

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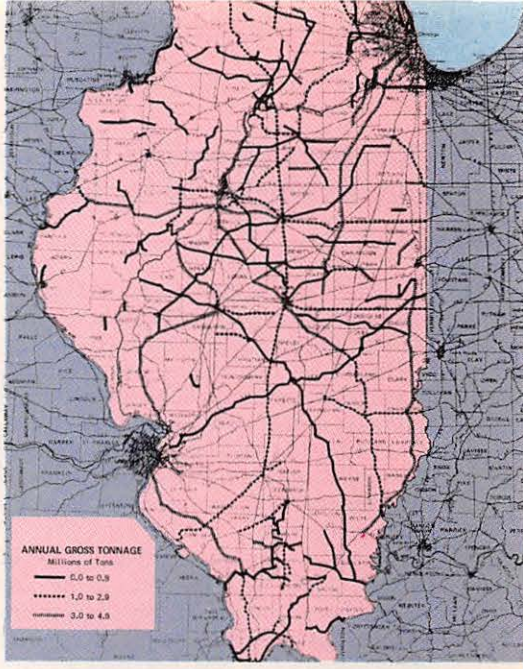
About half of the 10,350 track miles in Illinois are light-density, handling less than 5 million gross tons a year.



Illinois Terminal is rehabilitating track with a $1.25-million, no-interest loan (80% federally supplied)—the first move in the state Bureau of Railroads' effort to stop providing operating subsidies and start giving capital improvement aid.

Illinois: Away from railroading, into track improvement

By FRANK MALONE
Associate Editor

After guiding more than $10 million into railroad operating subsidies, Illinois state planners have concluded that their aim has been a little off. They've started to refocus on capital projects for track improvement, while striving to leave the running to the railroads. Railroads in the state seem receptive to the change, and shippers are starting to accept it, though they see some other states in the Midwest plunging ahead into direct railroad involvement.

In Illinois, the need for better-aimed rail aid is clear: About half of the state's 10,350 miles of track—second highest in the U.S.—are low-density with little chance for improvement on their own.

Through its Bureau of Railroads, the Illinois Department of Transportation has been involved with operating subsidies since early 1976, for former Penn Central segments left out of the final Conrail system. One of those, a 75-mile line from Decatur to Paris in east-central Illinois, is now the Wabash Valley, a short-line ward of the state. Track is leased from Penn Central, and WV is a state-designated operator. The same arrangement governs a 31-mile line from Kankakee to Sheldon in northeast Illinois, now known as the Kankakee, Beaverville & Southern. Both short lines have been losers and lessons.

"It doesn't work," says Scott Nadler, chief of the bureau. "From our experience, we've learned enough so that state policy no longer favors starting any new short lines, nor does it favor operating subsidies. It doesn't work because the state's not good at running a business. We don't make decisions quickly, not just because sometimes we're strangled by paper but because we're talking about public money, and therefore you've got to go through a legitimate set of checks and balances."

In a major grain exporting state, that recognition is especially important. "We can't run a business that is involved with something as volatile as grain, because we're not able to seize opportunities as they arise," Nadler says.

● **Shift well under way.** Ten lines currently are serious candidates for state-directed funding, and in all cases the analysis centers on capital improvement rather than operating subsidies. Four lines are on Illinois Central Gulf, two on the Milwaukee Road, one on Chicago & North Western, one on the Peoria Terminal, one on the Illinois Terminal, one on the locally owned Crab Orchard & Egyptian, and one is a segment currently operated by Conrail under contract with the state. Eight are candidates because of shipper/community request.

The first big effort at shifting came in fiscal 1979 with a $1.25-million loan to the Illinois Terminal for track rehabilitation. It was a no-interest loan, 80% federally supplied, as are all funds channeled through the state's local rail assistance service program. "For fiscal 1980, we expect to move much more strongly into the capital area," Nadler says. That could be through grants as well as loans, and loans could be no-interest or low-interest, depending on a railroad's circumstances. For the IT, there was a "capital formation" problem. Pay-back will be on a carload basis. A second loan is being discussed.

"We're getting some real interest from the railroads now," Nadler says. "IT; Toledo, Peoria & Western; and Illinois Central Gulf have talked with us very seriously. There are a couple of other roads, including one or two surprises, with whom we've had some serious discussions."

Shippers are showing interest, too, perhaps for the same reason as railroads: This type of state involvement is simply more acceptable than direct operating responsibility. "It's a very discreet, clearly identifiable role—they sign the contract, they get the money, they know our inspection policy, they know our audit policy. It's very clear-cut," Nadler says. "As for us, we're good at collecting money, and we're good at spending it; that's why the appropriate use for us is as a bank. That's why we're trying to move to grants and loans for track work, to one-shot infusions of capital. We're simply not the right agent for operating subsidies."

● **The paperwork problem.** Another reason for the shift is the paperwork burden that exaggerates the "economies of scale" on which the rail industry is based. Doubting that the Wabash Valley needed as many people as it had for paperwork related to interchange, the Illinois railroad bureau hired a consultant to see where cuts could be made. Nadler was surprised to learn that there was virtually no room for improvement. Says he: "It

"Shippers as well as railroads are beginning to be very interested in some of the capital projects."

was just about as tight as it could be; the amount of paper you process doesn't necessarily go down as your loads go down."

There is also a problem arising from the fact that the state-run lines compete with railroads in the same area. That can result, as it has in another midwestern state, in a subsidized short line's "flagging out" of commodities in rate increases, for competitive reasons.

As the state promotes rehabilitation of carriers' lines, what becomes of the subsidized lines? For the Illinois Department of Transportation, that's a big question. It applies both to the two short lines and to a segment operated by Conrail. By law, the state must continue to provide operating subsidies (it has also provided track funds for these lines) until late 1981. Meantime, an effort will be made to return these lines to the private sector, but the outlook isn't good, especially for the 65-mile Conrail segment between Paris and Lawrenceville, part of a questionable Paris-Cairo route in eastern Illinois.

"We thought we could return that line to continuous service in the private sector, but it looks like we were wrong," Nadler says. "No one will put in the kind of investment needed; no one will make the commitment we need to justify massive state investment as long as the marketability of Illinois coal is in so much doubt. Secondly, it's on the frontier of Conrail's system, and I don't think we can realistically expect that Conrail is going to put the kind of marketing, financial, and management investment into this line that would be needed."

● **A credibility problem.** Nadler has been chief of the bureau of railroads since August 1979. Before that, he was acting chief for a year, following other duties related to the Illinois transportation department's rail program, which was launched in January 1976. Because the program was first aimed at Conrail residue in Illinois, only lately has a resulting credibility problem seemed to lessen.

Focusing on the Paris-Lawrenceville line seemed right at the time, but the time apparently was wrong. Says Nadler: "We made some promises in very good faith, but we've learned a lot about what we could and could not do. Put the Illinois coal problem together with Conrail's reluctance and you've got a promise to restore a line to service that we are not going to be able to fulfill, as far as I can tell."

However, shippers also are seeing things more realistically these days, and Nadler believes the state's new "capital" approach is credible, indeed. He hears few extreme claims these days, such as that a shipper will "die" without a railroad or that carloads would rise astronomically with "decent service." He says shippers see that the state faces a shrinking rail system with a limited budget for saving only the most important segments with the best chances.

"There used to be an intricate mating dance, where you'd go through months and months of posturing," Nadler says. "I've seen a lot less of that in the past year. Shippers are now coming in with a very tight notion of what they want from us. If we can do it, fine; if we can't, they want to know, so they can act accordingly. As we've learned more, we've been straighter with them. Simply because we've done more, we've been able to be straight, and they have reciprocated.

"I can talk with them, because I work on the assumption that I am going to come across as just another bureaucrat. The key is not to pretend that I know more about their business than they do, or about the railroad business than they do. What I understand is the state program, the federal programs, and some of the railroads' policies, because I'm exposed to a different side of the railroads than shippers are. I see what railroads are doing all over the state and in some case all over their systems. But the big key is to remember that I'm going out to listen at least as much as to talk."

● **Shippers' doubts.** One important thing Nadler hears is an on-going discussion of railroad essentiality. "I'm seeing a split in terms of how shippers view their need for railroads. They're getting more realistic; they're looking at other modes. The shipper is being helped toward a view that the rail service is less essential because it is less useful. Some simply find that their rail service can't respond to market changes in their business. It's not that other modes are any cheaper, in fact they're becoming more expensive."

Illinois shippers seem wary of railroads' intentions, Nadler says. Many seem to think railroads simply want out of the railroad business once and for all, even though they understand the problems facing the industry. "Many shippers think the railroads dug the hole themselves, as part of getting rich on other business, and they have very little sympathy for how hard it is for a railroad to dig itself out.

"You don't have as many accusations against labor as you might expect. There's almost a feeling of solidarity between shippers and labor. There is awareness of federally funded competition, especially the highway system, but that's slightly muted. The more a shipper doubts his rail service, the more he thinks he may suddenly rely on the highway or rivers, and he doesn't exactly want to shoot off his big toe.

Another thing that has become muted, Nadler says, is the previous shipper interest in short lines. Shippers have learned that short lines can survive only in "very special" circumstances, that short lines surviving even five years are rare. They have come to understand the "immense" cash flow and capitalization problems of such lines.

"They're also getting wary of the car-leasing-based railroad," Nadler says. "They're realizing that it takes one set of skills, interests, and priorities to run a car-leasing business and another to run a railroad, and you usually don't find the two together. They see that you don't need all 60 miles, or whatever, of a short line to get your markings. "And they see how quickly a car service or per diem order can change and suddenly wipe out a profitable leasing business so that the management will simply say, 'Okay, time to cut and run.' "

As for the regulatory process, it is viewed by shippers first as protection, secondly as an impediment to some railroad plans. "If you don't like the direction a railroad's taking, the more red tape that gets in the way, the happier it makes you," says Nadler. There are exceptions, but by and large Nadler hasn't seen the kind of mutual understanding he had hoped to see on the part of both railroads and shippers for the hard economic facts of each other's business. He clearly doesn't think there's enough shipper appreciation of the realities of regulatory constraints on railroads: "When you've been dealing with the railroads for 35 years, and somebody comes from Springfield or Chicago or Washington to explain the railroad situation, what he says has to be awfully convincing. You have to find some awfully good words to change 35 years of experience."

● **The catalyst role.** That doesn't mean, however, that the outlook is necessarily bleak for shipper-railroad cooperation on programs needed for the state's farm-mine-factory economy. Nadler points out that "shippers as well as railroads are beginning to be very interested in some of the capital projects. That's the real hopeful sign, because that means there's finally some real interest in our doing what we can do well. We're finding that one of the best roles we can play is as a catalyst.

"We're finding that our money is less significant as hard dollars than it is as a catalyst, because it finally gets everybody sitting down in one room. We can be the one that goes first, while shippers and railroads are stuck in the chicken-and-egg syndrome. That's the best role we can play, as the nonbusiness, disinterested party with the money. We cannot be that if we're still operating a railroad."■

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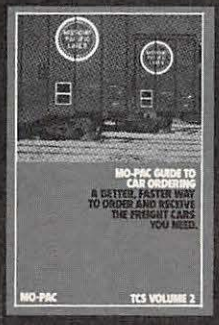

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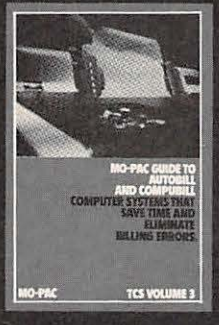

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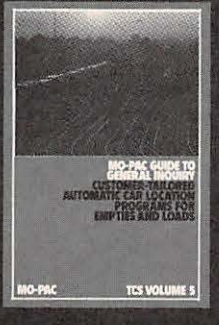
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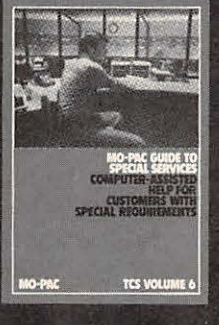

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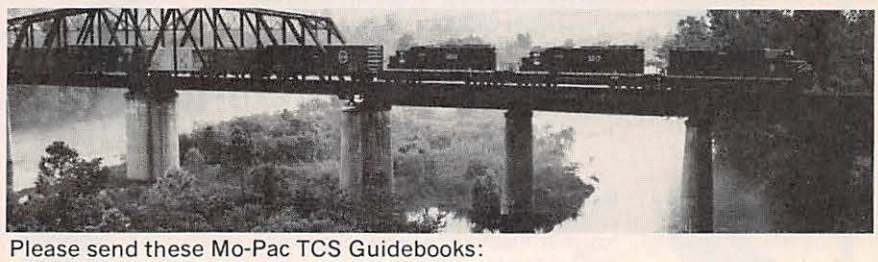

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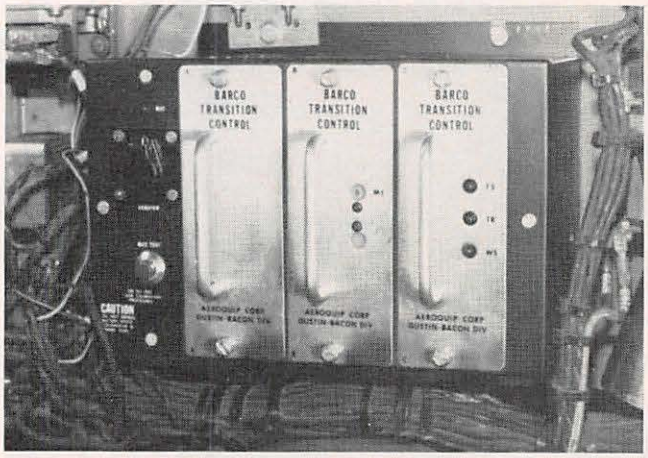

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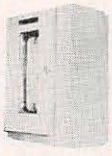

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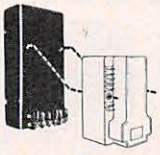

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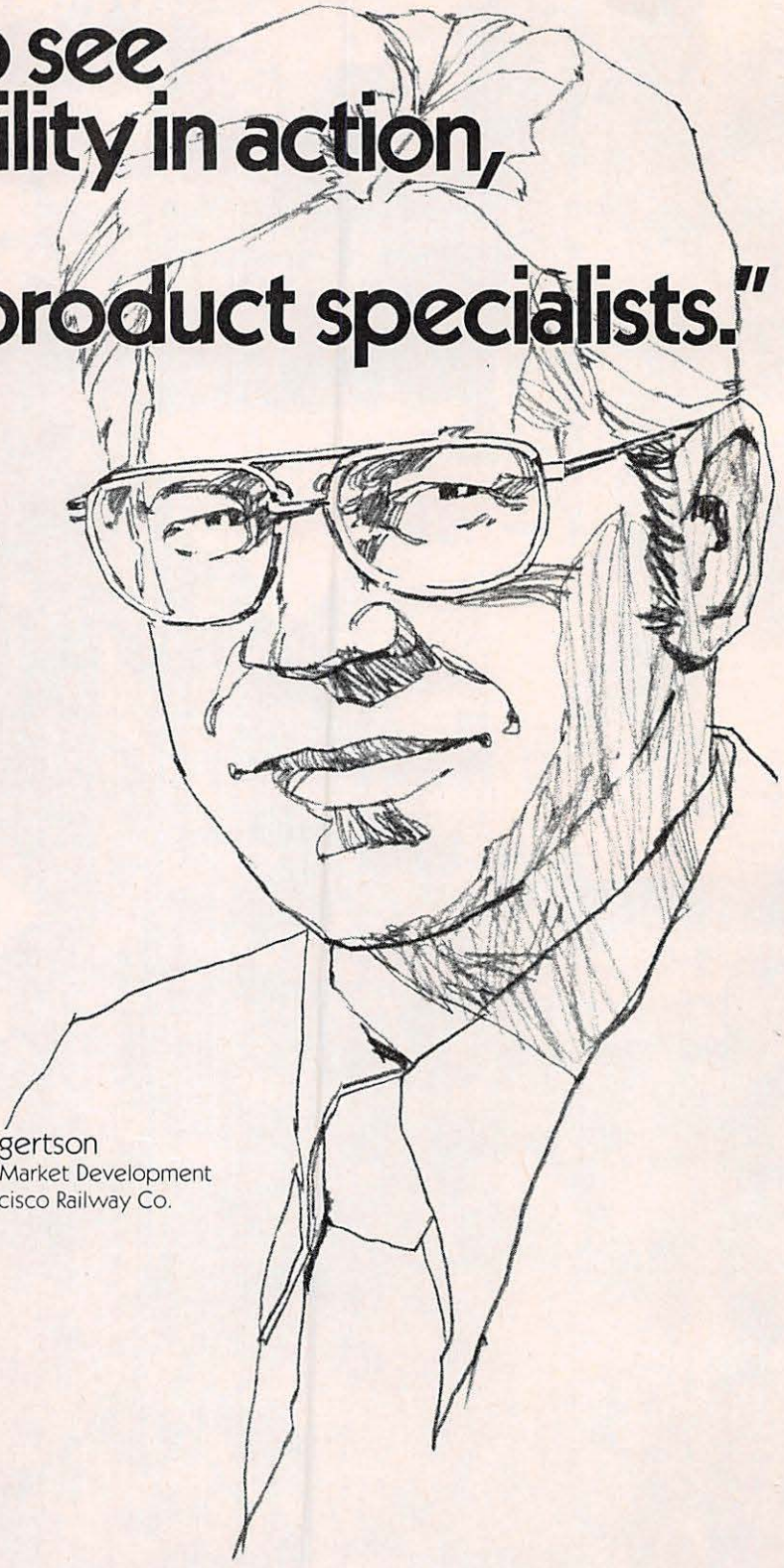

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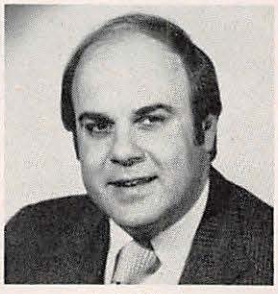

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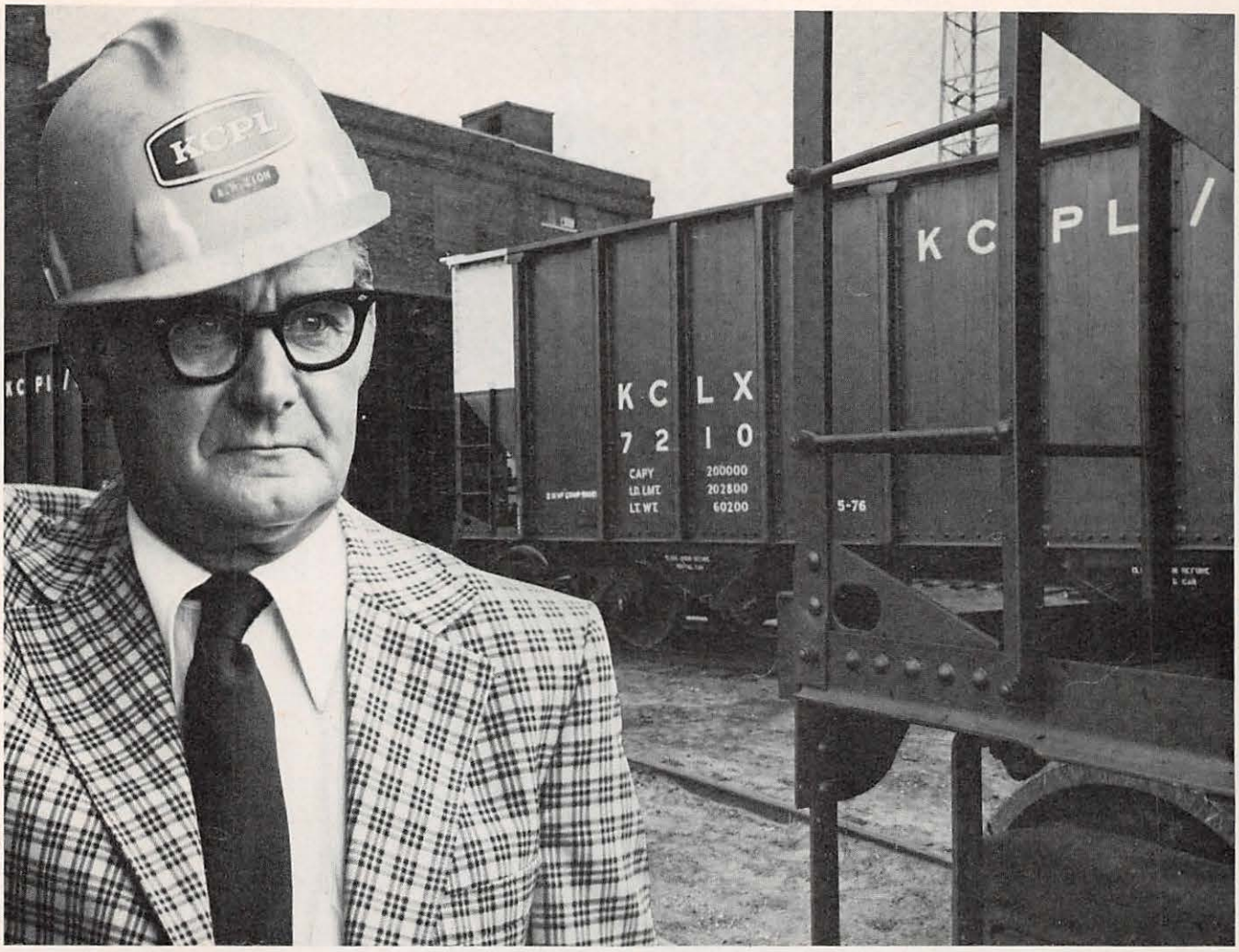

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A RAILWAY AGE SERVICE PAGE

REVENUES AND EXPENSES OF RAILWAYS

Third quarter figures of calendar year 1979

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

		Operating revenues				Operating expenses: Maint. of way & structures			Operating expenses: Maint. of equipment					Operating ratio		Income after fixed charges		Net Ry. operating income	Net income	
		Freight	Other	Total 1979	Total 1978	Total 1979	Total 1978	Deprec.	Total 1979	Total 1978	Deprec.	Total 1979	Total 1978	1979	1978	1979	1978		1979	1978
Amtrak	3 mos.	–	119,832	119,832	87,768	18,282	19,925	373	79,910	56,694	19,675	270,942	220,747	230.0	250.0	(25,061)	(28,873)	(449,886)	(25,061)	(28,873)
	9 mos.	–	300,497	300,497	240,395	51,540	44,289	1,295	209,574	176,116	37,946	750,377	649,112	250.0	270.0	(39,977)	(42,138)	–	(39,977)	(42,138)
Atchison, Topeka & Santa Fe	3 mos.	472,792	11,143	483,935	382,319	83,833	63,930	2,838	107,611	81,101	18,348	450,777	337,768	93.1	88.3	29,780	36,805	27,363	23,688	28,577
	9 mos.	1,317,388	32,677	1,350,065	1,116,299	232,800	203,290	8,366	293,813	242,088	53,223	1,234,387	1,025,201	91.4	91.8	107,467	74,731	–	84,947	57,721
Baltimore & Ohio	3 mos.	214,907	11,572	226,479	236,363	49,610	40,086	1,733	50,274	57,667	6,986	219,098	204,246	96.7	86.4	8,156	29,053	37,880	9,880	27,414
	9 mos.	645,131	33,783	678,915	601,606	122,380	104,226	5,216	160,495	157,739	20,689	638,307	566,956	94.0	94.2	36,641	29,049	–	33,545	27,859
Bessemer & Lake Erie	3 mos.	33,884	3,766	37,650	29,942	4,193	2,985	382	5,746	4,878	777	22,556	17,005	59.9	56.8	15,700	12,796	7,741	8,349	7,023
	9 mos.	80,994	8,718	89,712	63,206	9,916	9,670	1,100	16,120	10,430	2,356	59,451	42,630	66.3	67.4	31,351	20,625	–	16,471	12,759
Boston & Maine	3 mos.	25,796	1,298	27,094	22,582	8,118	4,367	276	8,260	5,941	621	31,478	22,758	116.2	100.8	(3,519)	(27)	4,324	(3,675)	(232)
	9 mos.	76,998	3,643	80,641	67,038	21,377	13,049	831	23,119	18,587	1,871	87,691	68,521	108.7	102.2	(5,398)	(1,455)	–	22,422	(2,070)
Burlington Northern	3 mos.	622,825	20,291	643,117	504,076	163,393	122,126	4,986	147,415	110,186	16,246	646,610	488,292	100.5	96.9	10,833	20,884	2,107	16,424	25,336
	9 mos.	1,702,226	56,099	1,758,325	1,448,569	370,836	293,949	15,045	407,881	328,033	48,068	1,687,717	1,379,059	96.0	95.2	110,281	86,338	–	125,443	93,740
Chesapeake & Ohio	3 mos.	190,888	12,798	203,686	193,796	38,359	34,929	1,333	44,083	41,343	5,800	189,502	174,201	93.0	89.9	28,584	45,238	27,170	21,556	33,585
	9 mos.	553,401	32,969	586,370	480,770	102,777	90,813	3,991	134,920	116,431	17,281	549,024	486,434	93.6	101.2	77,605	11,734	–	67,255	18,149
Chicago & North Western	3 mos.	176,698	20,167	196,865	168,075	42,001	39,440	759	51,728	42,989	4,535	196,103	167,818	99.6	99.8	(5,103)	(5,616)	717	(5,140)	(5,653)
	9 mos.	480,688	56,848	537,536	478,926	115,599	96,946	2,150	157,100	129,166	13,482	565,080	481,441	105.1	100.5	(43,107)	(16,413)	–	(43,217)	(15,921)
Chicago, Milwaukee, St. Paul & Pac.	3 mos.	104,976	13,759	118,735	115,079	31,177	26,707	1,091	39,950	40,790	4,490	147,160	137,361	123.9	119.4	(24,343)	(18,527)	(28,389)	(24,343)	(18,527)
	9 mos.	290,869	38,292	329,161	330,026	75,173	63,628	3,255	130,925	116,911	13,524	424,657	391,496	129.0	118.6	(83,396)	(52,527)	(95,446)	(83,396)	(52,527)
Clinchfield	3 mos.	16,190	385	16,575	15,932	3,018	3,872	109	2,646	3,374	1,033	12,535	13,317	75.6	83.6	(9)	32	4,572	–	–
	9 mos.	45,851	1,075	46,926	44,207	10,111	10,147	312	9,401	10,069	2,860	39,736	38,109	84.7	86.2	161	145	–	–	–
Colorado & Southern	3 mos.	22,044	499	22,543	17,263	9,648	4,474	56	5,288	6,481	663	28,758	19,088	128.0	111.0	(2,380)	(2,428)	(5,133)	(1,298)	(2,373)
	9 mos.	62,130	1,400	63,530	46,239	18,525	12,487	163	15,109	14,925	1,991	68,066	48,764	107.0	105.0	6,526	278	–	8,789	352
Conrail	3 mos.	778,589	158,532	937,120	853,325	241,697	228,752	2,401	280,091	265,480	18,498	1,100,247	1,008,681	117.4	118.2	(164,187)	(156,005)	(379,280)	(163,830)	(155,597)
	9 mos.	2,339,679	450,878	2,790,557	2,417,996	639,426	609,163	7,503	839,878	817,578	52,454	3,171,501	2,952,823	113.7	122.1	(375,699)	(540,820)	–	(374,462)	(539,552)
Delaware & Hudson	3 mos.	25,096	1,026	26,122	19,895	4,533	3,398	153	8,735	6,668	404	28,663	22,490	109.7	113.0	(3,310)	(3,428)	(2,541)	(3,310)	(3,428)
	9 mos.	71,556	2,203	73,759	62,513	12,811	9,849	458	24,430	21,242	1,217	79,484	68,869	107.8	110.2	(7,524)	(8,718)	–	(7,524)	(8,718)
Denver & Rio Grande Western	3 mos.	63,236	2,019	65,255	58,435	12,400	11,469	590	9,881	9,765	2,675	56,836	48,695	87.1	83.3	8,107	9,183	6,388	6,058	6,309
	9 mos.	184,855	4,897	189,753	160,203	35,663	30,194	1,750	29,850	25,843	7,512	160,135	133,606	84.4	83.4	29,834	26,218	19,929	19,993	16,543
Detroit, Toledo & Ironton	3 mos.	18,064	1,315	19,379	16,512	3,658	2,683	144	6,489	4,943	441	21,334	15,887	110.1	96.2	(1,900)	430	(1,943)	(1,900)	430
	9 mos.	59,046	4,396	63,443	50,150	10,248	7,265	403	17,896	15,541	1,303	60,347	48,815	95.1	97.3	(2,972)	898	(3,131)	2,972	898
Duluth, Missabe & Iron Range	3 mos.	31,102	981	32,083	25,256	7,707	7,140	429	3,890	2,805	660	21,375	18,966	66.0	75.0	11,388	6,570	5,277	5,949	4,194
	9 mos.	71,382	2,968	74,350	62,744	18,483	17,048	1,296	8,511	7,160	1,974	57,081	51,685	76.0	82.0	18,585	11,830	–	9,190	5,704
Elgin, Joliet & Eastern	3 mos.	20,392	14,505	34,897	34,235	4,253	3,479	179	5,762	4,074	1,097	28,214	24,534	80.9	71.7	8,069	10,574	2,895	4,281	5,423
	9 mos.	62,086	49,478	111,564	93,732	11,977	11,155	535	18,120	13,330	3,282	85,002	72,970	76.2	77.9	30,283	22,479	12,370	16,091	11,490
Florida East Coast	3 mos.	17,987	721	18,708	15,602	4,434	3,374	228	2,994	2,083	804	15,539	12,167	83.1	78.0	4,132	5,266	765	2,788	3,515
	9 mos.	54,468	1,648	56,116	48,839	12,430	10,978	697	8,005	6,199	2,366	44,394	38,073	79.1	78.0	36,541	13,841		25,583	9,047
Ft. Worth & Denver	3 mos.	22,880	837	23,717	15,493	3,930	4,777	66	4,641	4,558	99	19,848	16,411	84.0	106.0	4,102	(685)	3,157	3,390	(682)
	9 mos.	65,235	1,678	66,913	45,363	9,516	10,459	197	15,681	11,619	295	54,296	43,007	81.0	95.0	12,917	2,505		10,638	2,501
Grand Trunk Western	3 mos.	46,138	4,498	50,636	45,826	8,651	7,682	429	12,373	12,296	1,160	54,045	45,974	106.7	100.3	(3,200)	243	(3,405)	(3,200)	243
	9 mos.	147,701	11,915	159,616	141,184	21,856	18,489	1,494	43,076	38,893	3,472	159,529	139,200	99.9	98.6	1,241	2,792	93	1,241	2,792

Illinois Central Gulf	3 mos.	192,580	19,614	212,194	181,640	47,753	36,938	1,653	60,833	49,968	6,851	228,607	186,538	107.7	102.7	(21,129)	(14,169)	30,187	(19,925)	(14,558)
	9 mos.	557,709	53,753	611,462	547,138	122,393	100,457	4,969	176,553	148,463	21,405	643,734	549,404	105.3	100.4	(28,647)	(20,350)		(28,284)	(21,453)
Kansas City Southern	3 mos.	53,312	2,542	55,854	48,267	10,204	8,841	656	13,610	11,785	2,899	50,481	42,081	90.3	87.2	5,033	4,242	4,020	3,646	2,997
	9 mos.	149,739	8,760	158,499	140,688	30,598	25,540	1,914	37,025	32,763	8,525	141,662	123,105	89.4	87.5	15,941	14,463		12,672	11,236
Long Island	3 mos.	5,012	72,400	77,413	36,007	16,002	15,825	839	17,965	16,194	1,317	82,623	76,495	106.7	212.4	(5,502)	(15,085)	(4,165)	(5,502)	(15,085)
	9 mos.	14,810	208,733	223,543	104,920	54,033	45,115	2,518	53,407	45,921	3,951	244,295	214,990	109.3	204.9	(21,555)	(88,844)	(17,646)	(21,555)	(84,844)
Louisville & Nashville	3 mos.	234,493	7,536	242,029	201,591	43,965	32,919	1,538	58,199	52,325	9,778	230,566	193,867	95.3	96.2	2,101	(4,883)	24,482	14,040	(7,393)
	9 mos.	685,737	20,605	706,342	601,069	122,909	93,902	4,620	182,942	170,469	29,521	676,670	591,669	95.8	98.4	1,382	(24,279)		12,014	(29,047)
Missouri-Kansas-Texas	3 mos.	40,576	1,934	42,510	32,920	6,898	6,855	272	11,683	8,835	583	40,678	33,045	95.7	100.4	1,542	(1,816)	5,571	2,542	(209)
	9 mos.	112,433	5,174	117,607	99,668	22,335	18,865	815	33,740	28,188	1,664	117,211	98,684	99.6	99.0	(3,010)	(2,261)		2,175	2,246
Missouri Pacific	3 mos.	334,093	12,207	356,300	301,462	54,250	49,569	2,419	80,614	67,968	13,426	317,607	255,243	89.1	84.7	28,569	37,527	32,166	19,669	24,446
	9 mos.	1,001,924	34,277	1,036,202	880,871	165,183	140,511	7,153	236,607	202,837	38,759	908,507	755,190	87.7	85.7	104,857	106,135	102,875	72,967	70,825
Norfolk & Western	3 mos.	346,248	13,459	359,707	117,905	63,238	27,360	3,479	63,974	42,262	9,963	291,947	146,073	81.2	123.9	72,459	22,441	36,049	39,422	13,184
	9 mos.	1,018,838	38,532	1,057,370	671,869	163,791	108,548	9,734	189,838	154,994	40,734	837,462	611,906	79.2	91.1	230,850	101,609		140,185	69,089
Pittsburgh & Lake Erie	3 mos.	20,454	1,558	22,012	18,400	2,900	2,538	35	(198)	1,023	(479)	13,327	12,890	60.5	70.1	7,168	4,822	10,286	4,558	3,029
	9 mos.	52,106	5,128	57,235	45,387	8,424	7,737	345	4,596	3,321	3,636	43,118	37,321	75.3	82.2	12,090	4,678		8,287	3,900
St. Louis-San Francisco	3 mos.	105,068	3,286	108,355	95,841	18,676	17,625	859	23,187	22,030	3,575	102,328	89,047	94.4	92.9	3,131	1,675	5,750	2,499	1,207
	9 mos.	310,511	10,102	320,613	289,307	55,074	51,135	2,492	71,274	62,578	10,750	296,995	261,257	92.6	90.3	13,340	15,428		10,469	14,072
St. Louis Southwestern	3 mos.	62,197	727	62,924	53,035	10,162	10,304	340	9,275	6,832	5,684	54,725	43,893	87.0	82.8	7,571	8,424	7,795	7,165	9,283
	9 mos.	191,200	1,934	193,134	166,683	31,021	30,723	1,002	30,729	26,687	16,478	160,083	139,863	82.9	83.9	34,647	25,581		32,742	23,114
Seaboard Coast Line	3 mos.	245,369	8,300	253,669	217,830	43,253	37,371	1,956	60,636	52,915	7,691	238,039	205,064	93.8	94.1	27,919	3,106	18,838	31,042	4,187
	9 mos.	734,079	24,829	758,908	669,801	130,651	103,324	5,761	179,563	163,372	23,079	690,237	605,487	91.0	90.4	84,797	34,343		88,637	37,220
Soo Line	3 mos.	73,429	1,886	75,315	66,422	16,238	14,895	316	15,720	13,635	1,857	62,830	55,427	83.4	83.4	12,161	10,700		7,719	6,534
	9 mos.	199,038	4,694	203,732	182,523	39,862	35,514	925	44,327	37,266	5,411	179,103	154,591	87.9	84.7	24,829	26,906		15,548	16,789
Southern	3 mos.	356,843	10,307	367,151	308,234	64,491	59,706	6,146	65,796	58,495	17,227	300,937	262,350	82.0	85.1	61,436	33,432	155,076	40,713	23,448
	9 mos.	1,041,226	29,800	1,071,026	923,573	195,580	162,995	14,902	195,788	169,511	50,033	871,491	756,152	81.4	81.9	175,494	138,834		127,307	96,569
Southern Pacific	3 mos.	478,478	12,969	491,447	402,155	74,664	63,688	4,473	140,254	121,973	18,231	505,150	407,928	102.8	101.4	(21,116)	(7,586)	(11,835)	(19,259)	(3,705)
	9 mos.	1,393,827	35,881	1,429,708	1,224,715	213,335	196,041	13,901	391,602	349,034	53,723	1,387,751	1,210,824	97.1	98.9	44,829	19,693		40,749	18,773
Union Pacific	3 mos.	420,036	8,597	428,632	358,731	76,462	63,658	2,597	75,124	67,170	21,020	386,918	303,526	90.3	84.6	30,118	43,305	133,054	22,105	27,246
	9 mos.	1,245,822	22,701	1,268,523	1,093,952	213,439	180,000	7,763	232,399	197,130	61,910	1,094,193	913,298	86.3	83.5	144,472	149,785		103,255	99,057
Western Maryland	3 mos.	17,929	1,096	19,025	17,112	3,584	3,682	123	86	2,956	1,259	12,975	15,537	68.2	90.8	6,046	1,553	8,565	3,633	1,160
	9 mos.	52,433	4,179	56,612	48,286	9,928	9,376	368	6,055	8,501	3,658	43,762	44,424	77.3	92.0	13,076	3,634		8,770	2,719
Western Pacific	3 mos.	43,372	1,059	44,431		5,742		137	11,355		707	44,623		100.4		690		357	564	
	9 mos.	84,607	2,032	86,639		11,433		214	22,546		2,346	86,107		99.4		1,746			1,454	

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QUARTERLY INDEXES

Railroad charge-out prices and wage rates (Average 1967 = 100)

(Charge-out indexes reflect the original purchase price of fuel, material, and supplies charged to railroad operating expense accounts on the first day of the quarter. The indexes are developed from quarterly spot price indexes by providing appropriate lags between time of purchase and time charged to operating expense accounts. Wage rate indexes are based on average straight time hourly rates for the first month of the quarter; wage supplements indexes are based on the average per straight time hour paid for payroll taxes, health and welfare benefits, vacations, holidays, and other allowances.)

District and group	Oct. 1976	Jan. 1977	Apr. 1977	July 1977	Oct. 1977	Jan. 1978*a*	Apr. 1978*a*	July 1978*a*	Oct. 1978*a*	Jan. 1979*p*	Apr. 1979	July 1979	Oct. 1979
UNITED STATES:													
Fuel	352.6	360.4	381.1	395.3	399.0	403.1	405.9	405.0	407.2	419.7	469.6	603.2	739.7
Other materials & supplies	207.6	209.6	213.8	216.8	221.3	224.4	227.0	230.2	233.4	239.1	245.7	250.4	260.2
All material incl. fuel	248.5	252.1	260.6	266.5	270.9	274.3	277.0	279.2	282.1	289.8	307.5	345.6	387.9
Wage rates	213.8	219.4	220.0	231.3	232.8	240.8	248.2	254.8	259.7	267.5	267.5	285.6	285.6
Material prices & wages (and fuel)	224.7	229.6	232.7	242.3	244.7	251.3	257.2	262.4	266.7	274.5	280.0	304.4	317.6
Wages & supplements	233.5	241.6	243.1	253.6	254.7	267.2	272.9	278.1	281.9	294.1	294.1	311.4	311.4
Material prices, wages & supplements (excl. fuel)	228.4	235.4	237.4	246.4	248.2	258.9	263.9	268.8	272.4	283.4	284.7	299.5	301.4
Material prices, wages & supplements (incl. fuel)	237.6	244.5	247.9	257.1	259.2	269.2	274.0	278.4	282.0	292.9	297.8	320.8	332.4
EASTERN DISTRICT:													
Fuel	351.4	361.4	386.7	405.0	407.6	411.1	416.3	413.4	413.1	422.1	476.3	580.1	713.7
Other materials & supplies	202.3	204.4	208.5	210.2	213.4	216.2	217.2	221.5	226.0	230.2	239.6	243.0	252.9
All material incl. fuel	243.7	247.7	257.4	263.5	266.4	269.6	271.6	274.1	277.4	282.9	304.0	333.1	374.7
Wage rates	213.7	220.1	220.6	229.9	232.8	242.6	249.5	257.7	262.6	270.4	270.4	288.5	288.5
Material prices & wages (and fuel)	221.7	227.5	230.4	238.9	241.8	249.8	255.4	262.1	266.6	273.7	279.4	300.4	311.5
Wages & supplements	233.2	242.4	243.9	252.8	255.1	270.3	275.8	282.1	285.9	298.2	298.2	315.7	315.7
Material prices, wages & supplements (excl. fuel)	228.2	236.2	238.2	246.0	248.3	261.5	266.3	272.3	276.2	287.2	288.7	303.9	305.5
Material prices, wages & supplements (incl. fuel)	235.6	243.6	247.0	255.3	257.7	270.1	274.8	280.2	283.9	294.6	299.6	319.8	329.4
SOUTHERN DISTRICT:													
Fuel	324.1	332.0	354.3	369.3	372.2	375.6	375.3	373.0	374.7	389.1	428.4	509.3	622.7
Other materials & supplies	202.4	206.2	209.9	213.3	217.9	220.0	223.3	226.1	229.5	234.7	240.4	246.3	254.0
All material incl. fuel	235.0	239.7	248.6	255.0	259.2	261.6	263.9	265.4	268.4	276.0	290.7	316.8	353.2
Wage rates	213.9	218.9	219.4	233.6	233.2	239.6	248.9	255.5	260.4	268.3	268.3	286.5	286.5
Material prices & wages (and fuel)	221.1	226.0	229.4	240.9	242.1	247.1	254.0	258.9	263.1	270.9	275.9	296.8	309.2
Wages & supplements	235.0	241.9	243.5	256.3	255.9	265.9	273.2	278.5	282.4	294.3	294.3	311.8	311.8
Material prices, wages & supplements (excl. fuel)	228.0	234.2	236.2	247.0	247.7	256.0	262.4	267.2	271.0	281.4	282.7	297.7	299.3
Material prices, wages & supplements (incl. fuel)	235.0	241.2	245.0	255.9	256.9	264.6	270.4	274.6	278.2	288.8	293.2	313.3	324.3
WESTERN DISTRICT:													
Fuel	363.6	370.0	387.7	399.6	404.1	409.2	411.5	412.1	416.0	429.1	480.8	650.1	796.6
Other materials & supplies	212.6	213.9	218.5	221.9	227.2	230.8	233.7	236.5	239.2	244.7	251.6	256.3	266.8
All material incl. fuel	257.5	260.3	268.3	274.0	279.3	283.4	286.2	288.5	291.7	299.3	317.9	364.7	410.3
Wage rates	214.0	219.4	220.0	231.9	232.8	240.3	247.1	253.0	257.9	265.8	265.8	283.7	283.7
Material prices & wages (and fuel)	228.7	233.2	236.3	246.1	248.5	254.8	260.3	265.0	269.3	277.1	283.4	311.0	326.4
Wages & supplements	233.5	243.7	243.7	253.7	254.4	265.9	271.2	257.8	279.6	291.7	291.7	309.0	309.0
Material prices, wages & supplements (excl. fuel)	229.0	235.4	237.6	246.9	248.6	258.4	263.2	267.4	271.0	281.6	283.1	297.7	300.0
Material prices, wages & supplements (incl. fuel)	240.6	246.9	250.4	259.7	261.8	271.1	275.7	279.6	283.2	294.0	299.5	325.5	339.1

a—Wage rates in 1978 reflect the effects of retroactive pay increases applicable to time worked in 1978 but paid in 1979.

Spot prices of railroad fuel, material, and supplies (Average 1967 = 100)

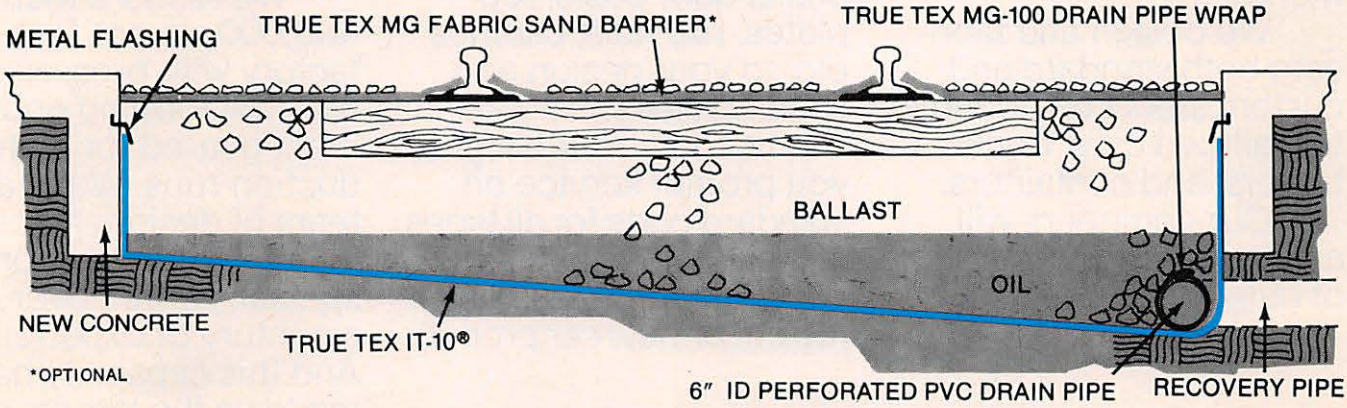
(Spot price indexes reflect the price on the first day of the respective month of 65 major items of railroad purchases reported by 10 major railroads representing about two-thirds of total purchases by all Class I railroads.)

District and group	Oct. 1976	Jan. 1977	Apr. 1977	July 1977	Oct. 1977	Jan. 1978	Apr. 1978	July 1978	Oct. 1978	Jan. 1979	Apr. 1979	July 1979	Oct 1978
UNITED STATES:													
Fuel (diesel oil)	354.8	363.3	389.9	398.1	399.7	405.0	406.2	404.4	408.8	425.4	491.6	659.1	780.2
Forest products	217.2	217.0	225.2	229.4	234.0	240.0	240.9	250.8	258.6	264.5	272.3	286.2	297.2
Iron & steel prod.	219.8	223.7	224.1	230.1	233.1	235.4	242.5	245.8	252.4	263.0	268.7	277.5	286.9
Miscellaneous prod.	202.5	208.2	212.1	215.7	218.2	220.1	221.3	222.5	227.0	231.1	234.3	243.7	250.4
Total, excl. fuel	209.6	213.8	216.8	221.3	224.4	227.0	230.2	233.4	239.1	245.7	250.4	260.2	268.3
Total, incl. fuel	250.5	255.9	265.1	270.7	273.4	276.5	279.5	281.5	286.8	296.3	316.9	367.3	404.7
EASTERN DISTRICT:													
Fuel (diesel oil)	353.6	365.2	397.3	408.9	407.0	413.4	417.9	411.1	414.0	426.0	501.4	619.6	760.9
Forest products	206.6	208.4	212.4	217.9	220.9	224.8	225.4	234.2	237.5	251.0	254.6	267.0	274.8
Iron & steel prod.	207.7	213.5	213.5	218.8	221.6	221.6	229.9	234.1	240.1	251.6	257.1	266.0	274.0
Misc_llaneous prod.	206.4	209.6	212.8	213.1	215.6	216.8	218.4	222.0	224.4	231.0	232.4	242.8	250.6
Total, excl. fuel	204.4	208.5	210.2	213.4	216.2	217.2	221.5	226.0	230.2	239.6	243.0	252.9	260.8
Total, incl. fuel	245.9	251.8	261.5	266.9	268.4	270.9	275.2	277.0	280.8	291.2	313.0	350.9	393.0
SOUTHERN DISTRICT:													
Fuel (diesel oil)	326.6	334.6	364.2	371.9	372.2	377.3	374.4	372.4	375.8	395.9	444.8	541.6	663.4
Forest products	223.5	225.7	227.4	232.2	230.4	240.2	242.0	255.4	258.7	266.5	276.9	288.4	299.7
Iron & steel prod.	221.6	225.4	226.2	232.6	236.2	238.0	245.5	247.3	254.3	263.1	369.3	277.4	288.0
Miscellaneous prod.	194.5	199.2	205.9	209.0	211.1	213.7	212.1	213.5	217.8	219.9	224.0	230.2	235.9
Total, excl. fuel	206.2	209.9	213.3	217.9	220.0	223.3	226.1	229.5	234.7	240.4	246.3	254.0	262.4
Total, incl. fuel	238.4	243.3	253.7	259.3	260.7	264.6	265.8	267.8	272.4	282.0	299.4	331.3	370.2
WESTERN DISTRICT:													
Fuel (diesel oil)	365.2	372.3	395.4	401.8	405.4	410.5	412.1	412.1	417.9	434.9	503.6	723.0	833.2
Forest products	226.0	223.8	237.1	240.7	250.2	254.8	255.8	265.2	259.9	279.0	288.0	304.2	317.5
Iron & steel prod.	218.2	221.7	221.7	227.6	230.6	233.7	238.9	242.8	250.1	260.4	265.3	274.9	283.4
Miscellaneous prod.	205.7	212.1	215.9	220.9	223.8	226.2	227.9	228.4	234.9	236.9	240.8	250.5	257.3
Total, excl. fuel	213.9	218.5	221.9	227.2	230.8	233.7	236.5	239.2	244.7	251.6	256.3	266.8	274.8
Total, incl. fuel	259.1	264.4	273.1	278.6	282.5	286.0	288.7	290.5	296.5	305.9	327.3	391.5	426.0

Note: Based on prices as of first day of months shown.

Source: Economics and Finance Dept., AAR.

A REVOLUTIONARY ADVANCE IN OIL CONTAINMENT SYSTEMS! ...FROM TRUE TEMPER



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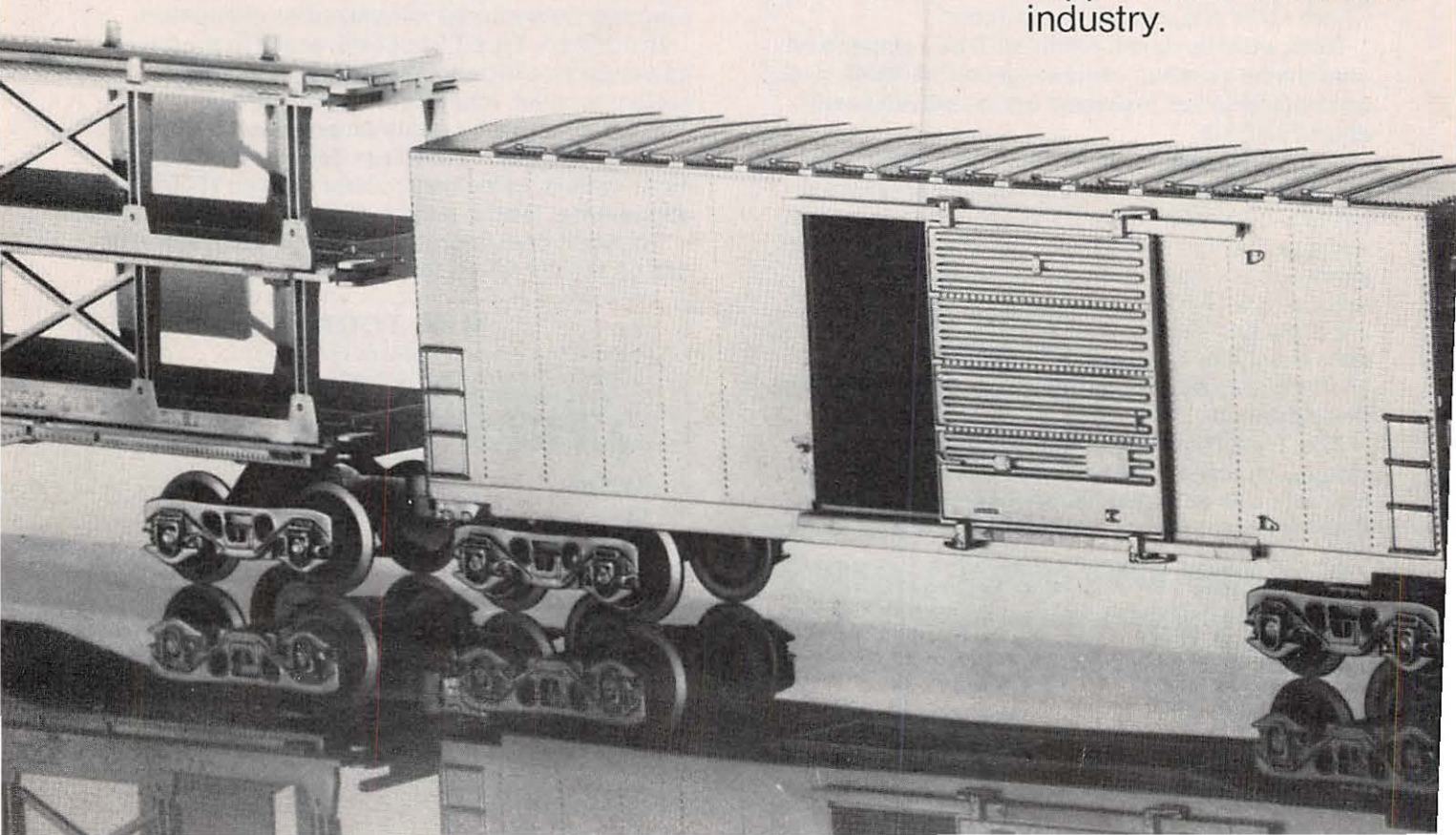

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BINKLEY

Circle 28 on Reader Service Card

100 YEARS AGO IN

(December 18 and 25, 1879)

In the interests of civilization, congress should speedily pass the bill now pending for dividing the lands in the Indian territory among the Indians in severalty. It is an absurdity that our government should exert its authority to preserve the tribal organizations of the bands of semi-barbarians who now hold the vast region of land in this territory against the entrance of civilization, and who have no claim to the rights of citizenship. The division of the land among the Indians as individuals would give each a small fortune, and if he wished to sell it to a white man or a railway company he would not suffer thereby. Several railways stand ready to penetrate these now desolate wastes and give every acre value. If Indian ignorance and prejudice stand in the way of their own interests, congress ought to interfere for them.

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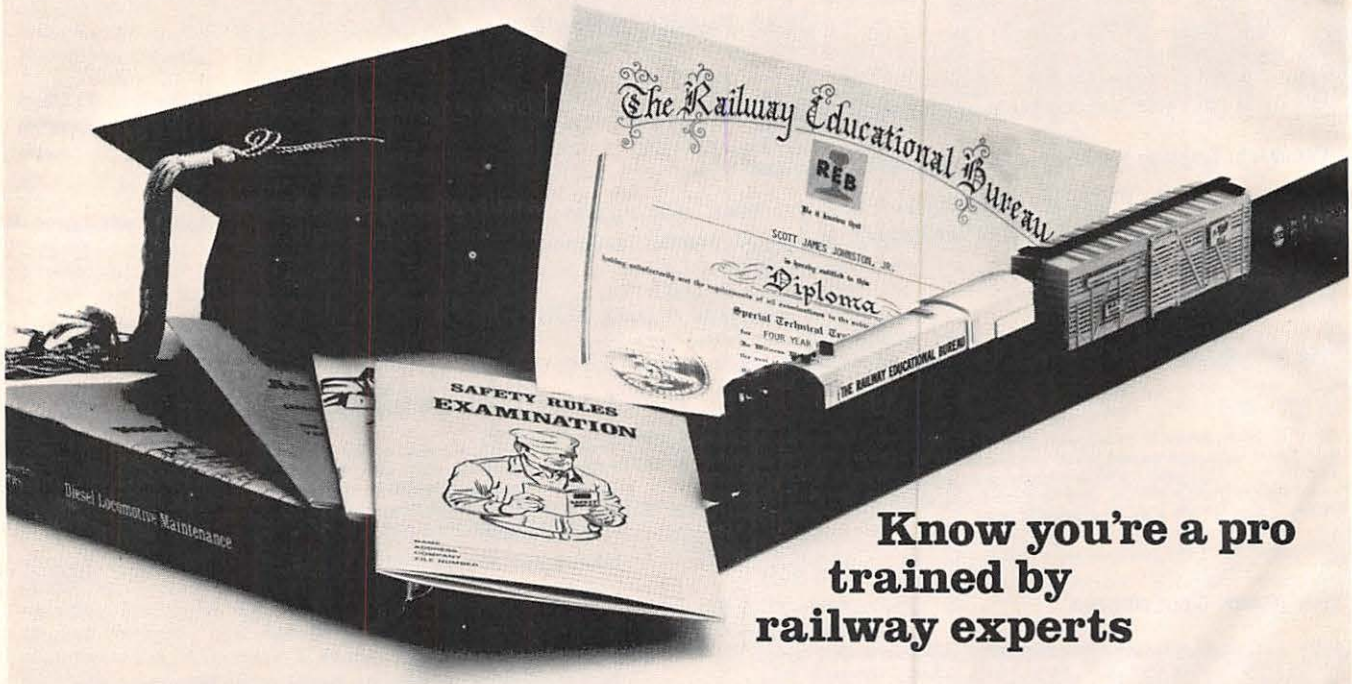
The confidence course



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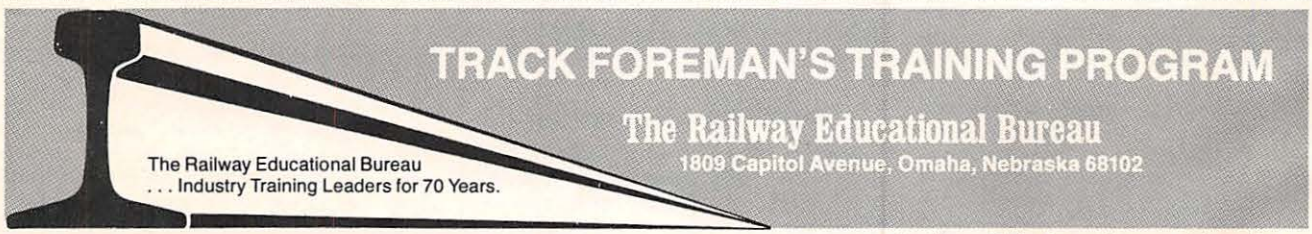
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☐	6—Track Surface
☐	7—Ballast
☐	8—Roadbed
☐	9—Rail Defects
☐	10—Rail Laying
☐	11—Rail Maintenance
☐	12—Rail Joint Maintenance
☐	13—Installation and Maintenance of Switchwork
☐	14—Welding and Grinding
☐	15—Railroad-Highway Grade Crossings
☐	16—Roadway
☐	17—Vegetation Control
☐	18—Track Inspection
☐	19—Mechanical Equipment
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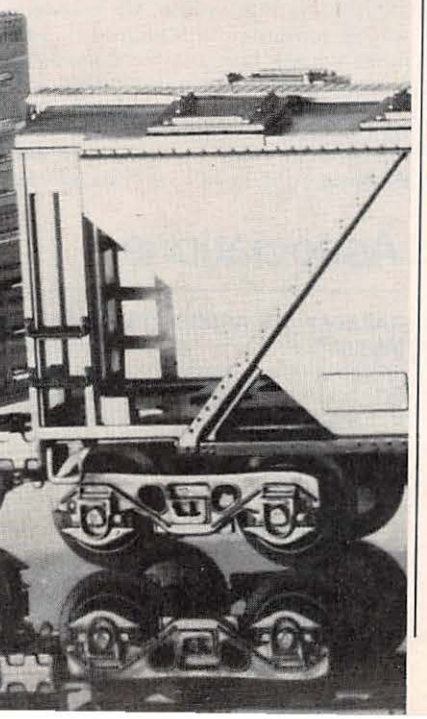

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People in the News

AMTRAK.—Marvin J. Liebow, director-program control, Northeast Corridor, Philadelphia, promoted to managing director-financial and program control, Northeast Corridor Improvement Project.

CHICAGO & NORTH WESTERN.—Edward A. Burkhardt named vice president-transportation; **Douglas A. Christensen,** vice president-marketing; **David G. Weishaar,** general market manager-energy; **John W. Carey,** general market manager-metals; **Edwin E. Ellis,** manager-equipment planning; **Barbara L. Mullaly,** assistant to the senior vice president-traffic; **Terry L. Sandstrom,** intermodal sales manager; **Sandra L. Williams,** intermodal sales administrator.

Jerry R. Panning, manager-train operations, Iowa division, Boone, Iowa, named assistant division manager-transportation for the division.

CONRAIL.—Kenneth L. Lowe, regional superintendent-transportation, Northern Region, Detroit, transferred to the Western Region at Chicago, succeeding **Lawrence A. Baggerly,** recently named regional superintendent-operations improvements, Atlantic Region, Newark, N.J. **Robert L. Gernon,** superintendent, Cleveland Division, Cleveland Ohio, succeeds Mr. Lowe at Detroit. **Ronald J. Conway** named superintendent, Lehigh Division, Bethlehem, Pa., succeeding **William R. Hurd,** who replaces Mr. Gernon at Cleveland, **Michael K. Fox,** former assistant to both the chairman and president of Conrail, named superintendent, Fort Wayne Division, Fort Wayne, Ind., succeeding Mr. Conway.

James D. Robinson named superintendent of police, Central and Southern Regions, Pittsburgh, Pa., replacing **Quentin McQuaid,** named superintendent of police, Atlantic Region, Newark, N.J.

DELAWARE & HUDSON.—Richard L. Woodward appointed director-forecasts and market reports, Albany, N.Y. **Joseph F. Federico** succeeds Mr. Woodward as manager-sales and marketing data systems.

DENVER & RIO GRANDE WESTERN.—J.D. Key, assistant vice president-sales, Denver, elected vice president-traffic. **J.R. Cook,** general marketing development manager, appointed assistant vice president-pricing. **J.J. Martin,** assistant vice president marketing services, appointed assistant vice president-sales.

FAMILY LINES SYSTEM.—At Louisville, Ky., **L.W. Downey** appointed manager-coal traffic development; **D.G. Catlin,** assistant general superintendent-safety and rules compliance; **J.C. Padgett,** general superintendent-equipment, succeeding **Carroll O. Wines,** retired; **Carl R. Gambrell,** superintendent-equipment; **J.B. Rodgers,** assistant general superintendent-train operations; **H.R. Birchfield,** director, coal operations.

At Pensacola, Fla., **M.J. Dumestre** appointed district sales manager, succeeding **John M. Brock, Jr.,** retired; **W.H. Loper** named sales representative.

At Chattanooga, Tenn., **W.J. Fugatt** appointed assistant district sales manager; **Don Adair,** district sales representative.

At Bowling Green, Ky., **C.K. Grigsby** named agent-general yardmaster, succeeding **J.W. Cheney,** retired after 39 years of service.

D.P. Collins, Jr., sales representative, Philadelphia, appointed assistant district sales manager, New York. **A.R. Kelly Jr.,** sales representative, Pittsburgh, named district sales representative there. **T.J. Leskiw,** office manager, Buffalo, N.Y., named sales representative, Pittsburgh.

FLORIDA EAST COAST.—Lemuel N. Griffin appointed assistant regional manager, sales and service; **J.P. Harrison,** district sales manager; and **Ms. Sara H. McGahee,** district sales representative, all at Atlanta, Ga. **D.W. Wood** appointed assistant to manager pricing, Hialeah, Fla.

FRISCO.—J.F. Wiggins, assistant treasurer and assistant to secretary, elected, treasurer.

ILLINOIS CENTRAL GULF.—Dennis N. Melin elected treasurer in addition to his position as vice president-financial planning.

MISSOURI PACIFIC.—E.T. Franzen, chief engineer-design and construction, retires Dec. 31.

PITTSBURGH & LAKE ERIE.—Has announced a reorganization involving consolidation of accounting, finance and treasury functions under direction of **Robert P. McConnell,** with the new title of corporate treasurer. **Albert C. Hardies, Jr.,** assistant comptroller, advanced to comptroller. **Donald F. Heckathorne,** manager financial planning, elevated to the newly created position of financial executive. **Terry E. Bishop,** manager tax accounting, promoted to director taxes & tax planning. **Charles O. Washburn,** acting treasurer, promoted to director cash management.

James W. McDonnell, Jr., manager market development, appointed director of freight car leasing.

PORTLAND TERMINAL PROJECT.—William F. Currier, assistant superintendent, Oregon division, **Southern Pacific,** named project director, succeeding **Larry Kirkeby** of **Union Pacific** who has been transferred to Salt Lake City.

SANTA FE.—J.P. Bullard named manager-sales and service, Atlanta, Ga., a new position. Mr. Bullard was manager of sales and service, Albuguerque, N.M. **Owen S. Kavanagh** appointed assistant manager-sales and service, New York. **Malcolm J. Orr,** district manager-intermodal sales, New York, retired. **Hector J. DeSoiza** named regional manager-intermodal sales; **Harold J. Nelson,** assistant district sales manager, and **Donald N. Matson,** area sales representative, New York. **John A. Kelly** becomes resident area sales representative in Connecticut. **William E. Lockwood,** assistant manager-sales and service, Los Angeles, appointed to the new position of assistant to general manager-sales and service, Chicago.

SEABOARD COAST LINE INDUSTRIES.—Dale H. Bitter appointed assistant vice president-insurance, Jacksonville. He formerly managed the **Union Pacific** insurance programs at Omaha.

Edward A. Burkhardt
C&NW

Douglas Christens.
C&NW

Charles M. Owens appointed assistant manager hazardous materials control, Jacksonville.

SOUTHERN.—James C. Edwards Jr., Lar K. Farris and **Rex J. Dagley** named sen coordinators, stations and terminals, Atlan Ga. **Chris E. Green** named coordinator, st tions and terminals, Atlanta.

Russell W. Carpenter, director, safet named superintendent, Georgia Division, wit headquarters as before at Atlanta. **Harold Mauney Jr.** assistant superintendent, Easte Division, Greensboro, N.C., named supe intendent, Crescent Division, Hattiesburg Miss.

SOUTHERN PACIFIC.—Robert I. Melbo superintendent, Eugene, Ore., terminal, ac vanced to assistant superintendent, Oregon di vision, Portland, to succeed **William F. Cur rier,** who is on leave of absence to direct th Portland Terminal Project study. Mr. Melbo successor is **Dan L. Andreason,** superinten dent of safety for the division.

UNION PACIFIC CORP.—Paul J. Coughlin Jr., elected vice president-Washington affairs succeeding **Richard N. Little,** who has retired Mr. Coughlin has served in UP's corporat headquarters in New York since 1973 as ge eral counsel for the corporation and as easte general counsel for the railroad.

U.S. RAILROAD RETIREMENT BOARD.—James C. Boehner named administrative a sistant to the labor member. Mr. Boehner, wh was an administrative management speciali in the Board's Bureau of Retirement Claim General Administration and Budget sectio replaced **Ken Zoll,** who assumed the duties the labor relations officer, Office of the Labo Member, after the reassignment of **Emil Banjavic** to the Board's San Francisco region.

Associations

RAILWAY TIE ASSOCIATION.—William Martinell, executive vice president and ch operating officer, **Southern Wood Piedmo Co.,** has been elected president, RTA. **Robe B. Dehls,** vice president, Forest Produc Group, **Koppers Co.,** was elected vice pre dent, RTA.

Obituary

William G. Pfohl, 73 retired director-system services, **Penn Central,** died Oct. 24.

The Railway Age Bookstore

Just Published!

The Carman's Dictionary

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WHO'S WHO In Railroading and Rail Transit

Included in this eighteenth edition of Who's Who in Railroading and Rail Transit are the biographies of key people in these closely related industries.

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Publications of Interest

ELECTRONICS ON THE RAILS

This is a reprint of a popular series of articles written by General Electric engineers describing basic locomotive electrical components and their operation. Resistors, capacitors, transistors, diodes, silicone controlled rectifiers, shockley and zener diodes, thyrectors, tunnel and avalanche diodes are covered in this fully illustrated volume.

Single Copy..... $6.95

RAILROAD BRAKE SHOES

Some of the topics covered in this booklet include; The Air Brake System and Brake Rigging, Brake Ratio, Lever Ratio, The Forces of Friction in Railroad Braking, and terminology associated with today's railroad brake shoes.

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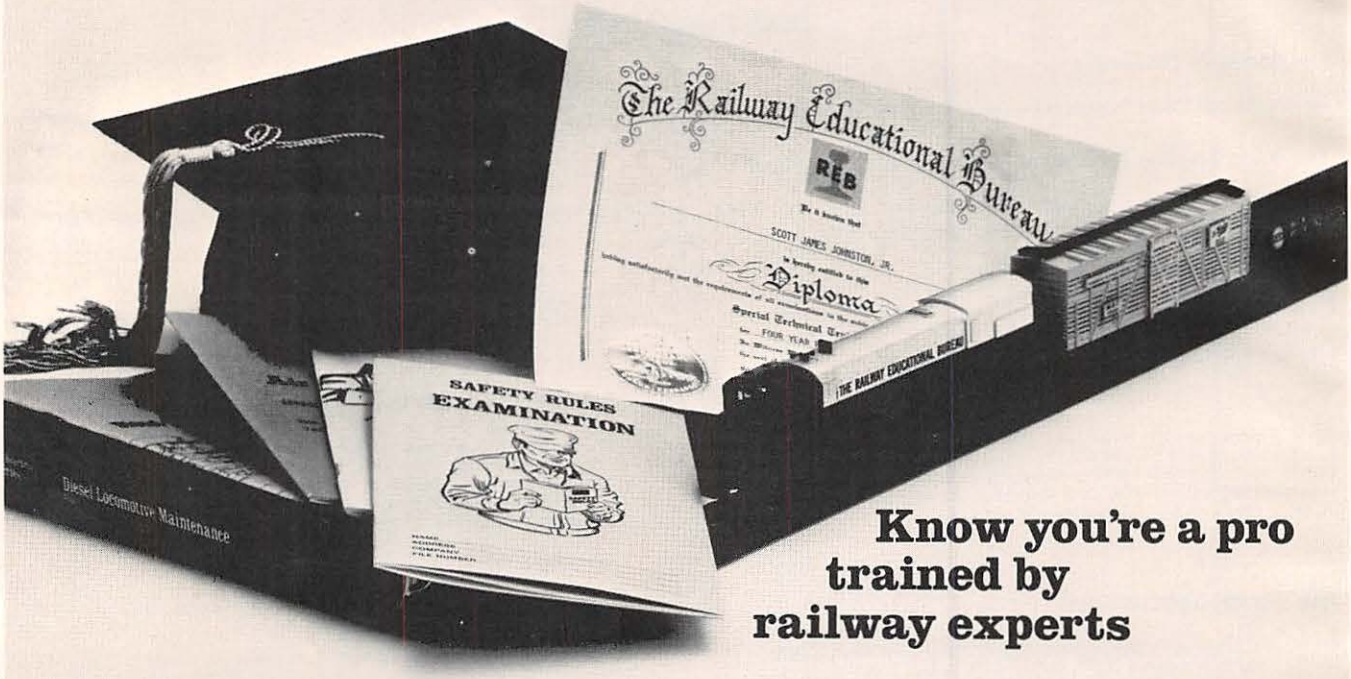

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CARLOADINGS

Loadings of revenue freight in the week ended Dec. 8 totaled 472,045 cars, according to the Association of American Railroads. This was a decrease of 6,489 cars, or 1.4%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Dec. 8 are estimated at 18.1 billion, an increase of 4.4% above the corresponding week of 1978.

REVENUE FREIGHT CARLOADINGS

Commodity	Dec. 8 week	Dec. 1 week	Nov. 24 week
Grain	35,027	34,081	30,624
Farm products	6,213	6,730	5,792
Metallic ores	32,180	35,406	32,891
Coal	109,339	107,292	97,074
Crushed stone, gravel & sand	14,828	15,210	12,621
Nonmetallic minerals	14,014	15,607	14,180
Grain mill products	19,190	17,965	15,673
Food and kindred products	19,397	18,771	15,596
Primary forest products	21,361	21,151	16,513
Lumber & wood products (except furniture)	10,063	10,006	7,898
Pulp, paper & allied products	22,081	22,190	20,118
Chemicals & allied products	28,476	29,406	23,790
Petroleum products	6,451	6,456	4,987
Stone, clay & glass products	17,097	17,474	14,858
Coke	5,847	6,312	5,708
Metals & products	17,151	18,578	14,756
Motor vehicles & equipment	21,647	19,313	14,308
Waste & scrap materials	13,527	12,873	10,816
Forwarder & shipping assn. traffic	12,228	11,662	9,328
All other carloads	45,656	43,122	35,519
LCL traffic	272	352	294
Total car loaded	**472,045**	**469,957**	**403,344**

	1979	1978
Cumulative total, 49 weeks	22,656,248	22,100,655
Estimated revenue ton-miles (billions) 49 weeks	855.0	809.9

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Dec. 1 totaled 35,392 cars (0.1% beow the corresponding 1978 week) and 62,002 trailers or containers (up 8.5% from 1978). Cumulative volume for the first 48 weeks of 1979 is 1,724,867 (up 1.4% from 1978) and 3,043,690 trailers or containers (up 3.6% from 1978).

CANADIAN CARLOADINGS

Canadian railway revenue freight loaded in the seven-day period ended Nov. 21 totaled 5.6 million tons (up 4.4% from 1978). Cars loaded totaled 82,512 (up 3.5% from 1978). Cumulative loadings for 1978 were up to 235.5 million tons (up 9.5% from 1978).

• *Argentine Railways.*—Ordered 16 12-cylinder, 2,050-hp diesel engines from Alco Power of Auburn, N.Y., to upgrade the system's Alco locomotive fleet.

• *CP Rail.*—Ordered 75 3,000-hp diesel-electric units from General Motors of Canada Ltd. at an estimated cost of $75 million (Canadian). Delivery is scheduled for fourth quarter 1980 and first quarter 1981. CP Rail also ordered 50 100-ton, 65½-foot gondola cars from Hawker Siddeley at a cost of approximately $2.6 million.

• *U.S. Department of Transportation.*—Has asked Congress for an additional $750 million for the Northeast Corridor Improvement Project. This would bring the total cost of upgrading Amtrak's Washington-New York-Boston line to $2.5 billion. The additional money is needed, said Federal Railroad Administrator John M. Sullivan, in order to complete the project as it was originally planned. He said unexpectedly steep inflation and construction delays have escalated the early cost estimates, adding: "By sticking to the original basic project, we can produce an electrified, high-speed public transportation system, potentially independent of the need for petroleum."

• *Freight cars and locomotives.*—The following report has been received from the AAR and the ARCI:

DELIVERED

	October 1979	October 1978	September 1979	Ten Months 1979	Ten Months 1978
Built new by carbuilders	7,758	6,174	6,618	68,513	49,855
Built new in RR shops	349	291	344*	4,469	3,868
Built new - total	8,107	6,465	6,962*	72,982	53,723
Rebuilt	96	8	94	1,612	1,298
TOTAL DELIVERED	**8,203**	**6,473**	**7,056***	**74,594**	**55,021**
Locomotives (new and rebuilt)	183	104	269	1,564	1,024

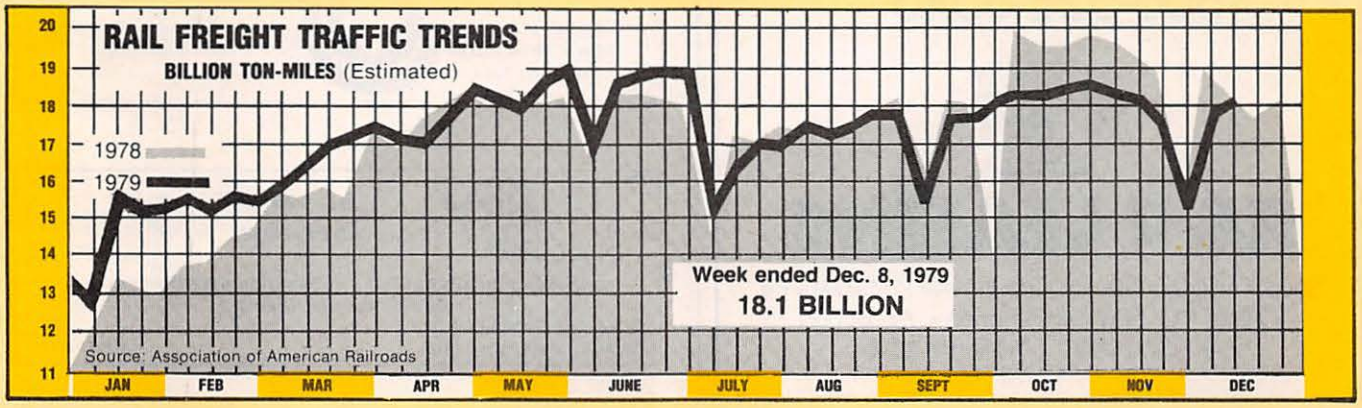
ORDERED

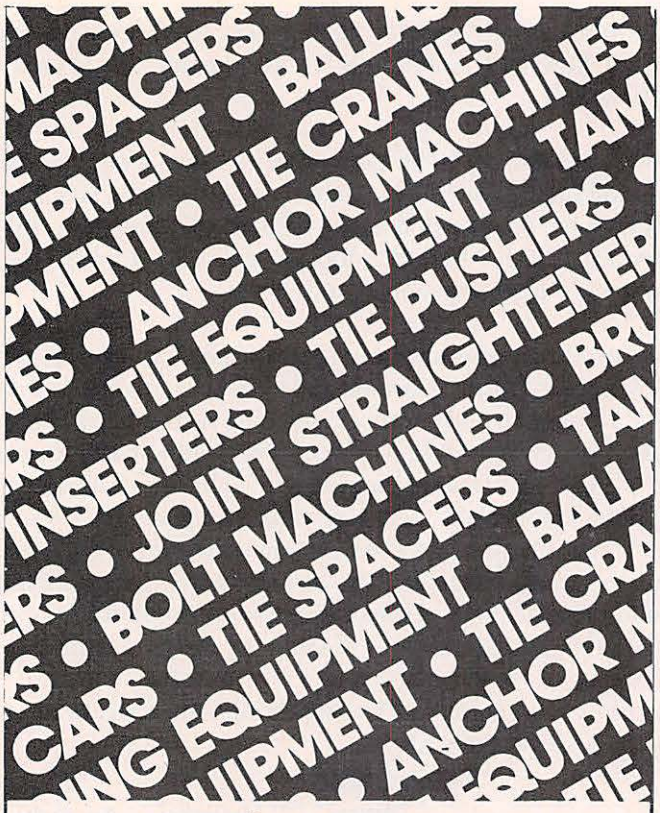
	October 1979	October 1978	September 1979	Ten Months 1979	Ten Months 1978
To be built new by carbuilders	6,129	9,010	10,881	99,777	102,166
To be built new in RR shops	0	0	992*	4,463	2,934
To be built new - total	6,129	9,010	11,873*	104,240	105,100
To be rebuilt	95	0	155	895	122
TOTAL ORDERED	**6,224**	**9,010**	**12,028**	**105,135**	**105,222**

ON ORDER AND UNDELIVERED

	November 1 1979	November 1 1978	October 1 1979	Average backlog 1979	Average backlog 1978
To be built new by carbuilders	117,422	82,119	121,375	113,746	58,169
To be built new in RR shops	6,305	5,486	6,654*	6,359	5,403
To be built new - total	123,727	87,605	128,029*	120,105	63,572
To be rebuilt	170	100	171	117	505
TOTAL ON ORDER	**123,897**	**87,705**	**128,200***	**120,222**	**64,077**
Locomotives (new and rebuilt)	774	924	677	1,000	746

*Revised figures

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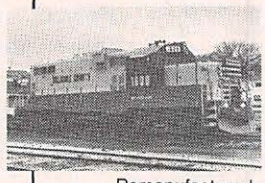

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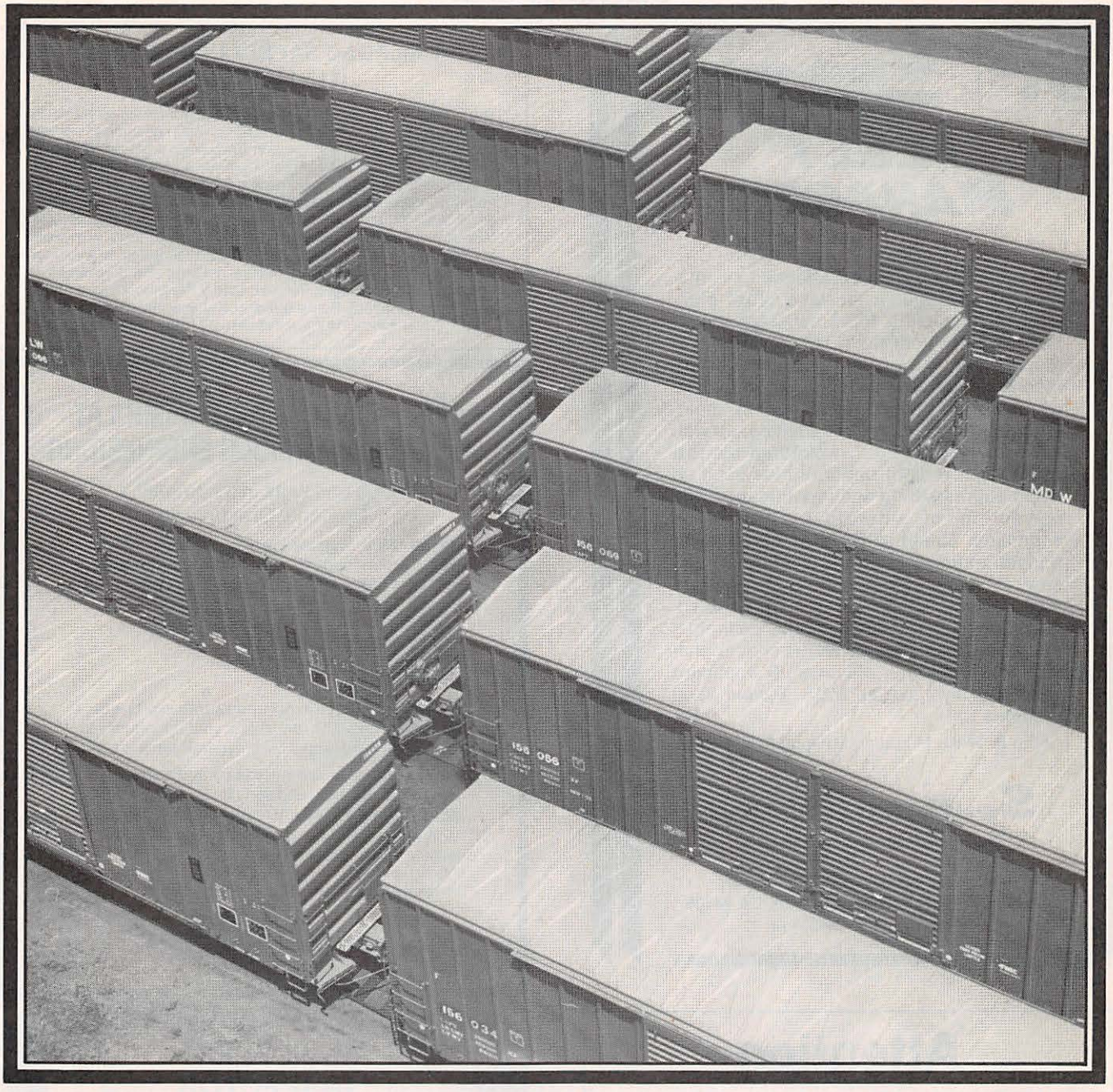

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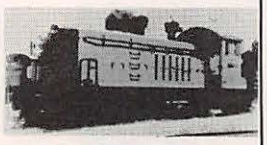

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PUBLIC NOTICE
MARYLAND DEPARTMENT OF TRANSPORTATION
NOTICE TO
ARCHITECTS & ENGINEERS
TRANSPORTATION PROFESSIONAL SERVICES SELECTION BOARD
REQUEST FOR PROFESSIONAL SERVICES

The Secretary of the Maryland Department of Transportation has certified to the Transportation Professional Services Selection Board the need by modal administrations to utilize the services of architects or engineers for the specific projects listed hereinafter by the individual modal administrations.

Firms interested in being considered for work on a Project must submit a separate letter of interest, in duplicate, for each individual Project. Each letter of interest shall be in a separate envelope marked with the specified contract number for each Project. Said letter will indicate the firm's desire to perform services and indicate what percent of the work will be subcontracted. In addition thereto, the letter of interest will specify the specific tasks or areas of expertise which are expected to be subcontracted. Interested firms and their designated subcontractors not having a current U.S. Government Form 254 on file with the Bureau of Consultant Services must submit one extra copy of same, in addition to that copy submitted with each individual letter of interest, as set forth hereinafter, or the interested firm will not be considered for services on the project. Additional information, if available, may be obtained from the responsible modal administration Project representative at the telephone number specified.

Of all the firms expressing interest in a Project, those adjudged most qualified shall be requested to submit technical and price proposals. Additional information will be supplied to the aforementioned selected firms so that they can prepare such proposals for the Project. The final contract shall be awarded on a competitive basis.

Questions concerning submissions and procedures may be addressed to the Bureau of Consultant Services, telephone number (301) 383-4100.

No response received after 4:00 P.M. on the dates specified herein will be accepted, no matter how transmitted.

RESPOND TO: BUREAU OF CONSULTANT SERVICES
Room 207, 300 West Preston Street
Baltimore, Maryland 21201

1. State Rail Administration
   A. Contract Number: SRA 2103-01
      1. Project Description: Engineering services for the further development of capital and operating costs, revenue and patronage estimates associated with the potential expansion of commuter rail service into Baltimore City from the northeast and from the south. A determination of the cost effectiveness and feasibility of implementing this expanded service and a plan of implementation is sought.
      Consultant Services Required: Consultant planning and engineering services are required to review and update existing commuter rail patronage and revenue estimates, and capital and operating costs developed by the Baltimore Region Phase II Transit Study. Estimates of required equipment and facilities based on the updated patronage estimates and identification of present facilities will be required. The cost effectiveness of commuter rail service will be investigated by comparing patronage and costs with a bus service alternative prepared by the Maryland Department of Transportation. After public review, a final implementation plan will be prepared including refined patronage and revenue estimates, detailed operating and capital costs, and layouts and preliminary design of suggested station locations. Operating characteristics and constraints considering various service and points and the size and location of equipment maintenance facilities will be investigated. In preparation of the preliminary estimates and final implementation plan, full attention will be given to transportation systems considerations, including some environmental analysis and accessibility for the elderly and handicapped.
      2. Specific Type Firm Solicited: The consultant must have experience in planning commuter rail operations, demand analysis and estimation, railroad track layouts, analyzing railroad operating and maintenance costs, station facility design, environmental analysis and urban public transportation planning.
      3. Additional Required Information: Limit letter of interest to five (5) pages. One Government Form 255 must be submitted. Also, for every firm, including subcontractors proposed, one Government form 254 must be submitted. For each firm not already on file with the Bureau of Consultant Services, two (2) Government Form 254's must be submitted.
      4. Special Requirements and/or Limitations: Not applicable.
      5. Project Representative: No additional information available.
      6. Respond by: January 18, 1980
         RESPOND TO:
         BUREAU OF CONSULTANT SERVICES
         Room 207, 300 West Preston Street
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William M. Corun, Chairman, Transportation
Professional Services, Selection Board

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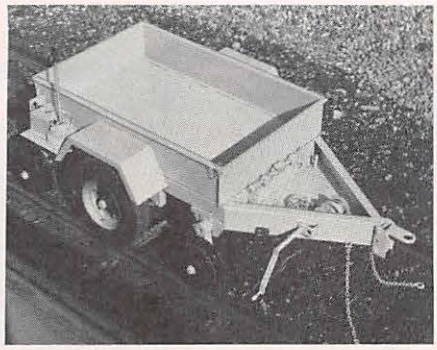

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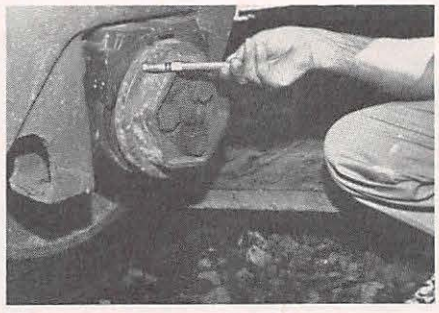

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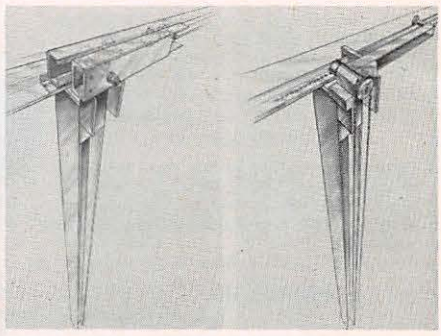
Crayons formulated to melt at specific temperatures enable trainmen to confirm whether a railcar's journal boxes or roller bearing adapters are heated to the "hotbox" stage. Tempilstik°, offered by Tempil Division of Big Three Industries, Inc., is made in more than 100 formulations with systematically spaced temperature ratings from 100 to 2,500°F. Each unit indicates a specified temperature with a tolerance of plus or minus 1% of its rating. The appropriate Tempilstik° is stroked onto the journal box or roller bearing adapter when a signal has been received by the crew that the bearing is running hot. If it leaves a dry mark, the unit is below its temperature rating; if the stick melts and leaves a liquid smear, the bearing is running hot.

Circle 61 on Reader Service Card



Auto-parts car stanchion

A new, lightweight DF (Damage Free) Stanchion for new and existing railcars used to ship auto parts has a captive suspension system said to provide greater safety for workers. Evans Products Co. offers the stanchion in two configurations: The closed stanchion (left drawing) has a C-shaped section on the upper track for worker safety; it does not require an inching chain. The open stanchion can use existing track and is available with or without an inching chain. Both use standard track on the floor. Stanchions come with either steel or aluminum columns, four units to each car set. For easy operation, handles for releasing the stanchion's locking pins can be operated either from within the car or from the loading dock. Designed to meet AAR capacity requirements for hi-cube cars.

Circle 62 on Reader Service Card

Tripod for lifting

Up to 3,000 pounds can be lifted with a heavy-duty, adjustable, aluminum tripod offered by Lug-All Corp. for use in the shop or at a job site. The unit weighs 65 pounds and folds compactly for transporting. Standing 12 feet high with legs extended, it can lift 1,500 pounds; at 8 feet with legs collapsed, it can lift 3,000 pounds. Tripod legs are independently adjustable to different lengths and angles for safe hoisting under various condi-

CLASSIFIED

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE RAILROAD ADMINISTRATION
INVITATION FOR BIDS
REHABILITATION OF LOCOMOTIVE-HAULED RAILROAD PASSENGER COACHES
CONTRACT NUMBER SRA 2101-13

Sealed Bids will be received from bidders until 2 p.m., Friday, February 29, 1980. Bids shall be addressed to the State Railroad Administration, P.O. Box 8755, Baltimore-Washington International Airport, Maryland 21240, and marked "Bid for Rehabilitation of Locomotive-Hauled Railroad Passenger Coaches, Contract No. SRA 2101-13". At that time, the bids will be opened publicly and read aloud at a location at the above address.

The work will consist of the complete rehabilitation of 22 locomotive-hauled railroad passenger coaches, including their conversion to head-end electric hotel power supply and the installation of cab control equipment in a limited number of units.

The coaches are presently located in Maryland and arrangements for their inspection by prospective bidders will be made through James A. Emery of the State Railroad Administration at (301) 787-7357.

Bid and Contract Documents, including: Notice to Contractors; Bid Forms and Documents; Contract Documents; General Provisions; Special Provisions; and Technical Specifications may be examined at the State Railroad Administration, Maryland Department of Transportation, located on Elm Road at Baltimore-Washington International Airport, Maryland (Mr. James A. Emery). Copies of the Bid and Contract Documents may be obtained from the State Railroad Administration at the above address upon receipt of a check payable to the State Railroad Administration in the amount of $5.00 for each set of documents.

A pre-bid meeting will be held on Thursday, January 31, 1980 at 2 p.m. local time in the State Railroad Administration offices for the purpose of explaining the procurement and answering questions of parties interested in contracting for the Work.

Bids must be submitted on the proper forms, furnished by the Administration and must be accompanied by a completed Contractor's Questionnaire—Pre-Award Evaluation Date Form.

Each bidder must also deposit with his bid:

1) A non-collusion affidavit.
2) A bid bond in the amount of 10% of the specific total dollar value indicated on the proposed bid.
3) A bid letter from the cosigned Surety confirming that Payment and Contract Bonds will be furnished if the bidder is awarded the contract.

The Administration reserves the right to reject any and all bids and waive technical defects if, in its judgment, the interests of the Administration so require.

Contracts resulting from bids submitted are subject to a financial assistance contract between the Maryland Department of Transportation and the U.S. Department of Transportation.

All bidders will be required to certify that they are not on the U.S. Comptroller General's List of Ineligible Contractors.

Bidders on this Work will be required to comply with all applicable Equal Employment Opportunity Laws and Regulations.

The State Railroad Administration hereby notifies all bidders that it will affirmatively assure that in regard to any Contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, age or national origin in consideration for an award.

Any bid received after the time and date specified will not be considered.

Charles H. Smith
Administration

SRA 2101-13
December, 1979

WHY USE A RECRUITER?

Extensive personnel changes are taking place in the rail affiliated industries. As rail placement specialists we are able to analyze the market to your best advantage. Company inquiries and applicant resumes processed confidentially.

Call or write — Gail Eakin — 206-455-0950
Dunhill of Bellevue, Inc.—1021-112th. N.E. Bellevue, Wa. 98004
—WE ARE EXCLUSIVELY EMPLOYER RETAINED—

COMING UP IN RAILWAY AGE...

January 28

Annual Review and Outlook

This is the issue that becomes the reference work for the industry, with first-time-in-print statistics on all railroad industry barometers. The complete review of 1979, and the industry-respected forecasts of what to expect in 1980.

Advertising closing: January 7

February 11

Railroad Technology: The State of the Art—and Beyond

The first of a major ten-part series exploring today's technology and tomorrow's needs. Part One will discuss *Traffic Control Systems.* Plus the annual Railway Age exclusive "Railroader's Guide to Washington."

Advertising closing: January 21

February 25

Commodities-By-Mail: Coal

A six-part series on movement of commodities by rail will begin in this issue. The first article will feature coal traffic with emphasis on the unit-train growth and the future role of coal as petroleum supplies grow scarcer and prices escalate.

Advertising closing: February 4

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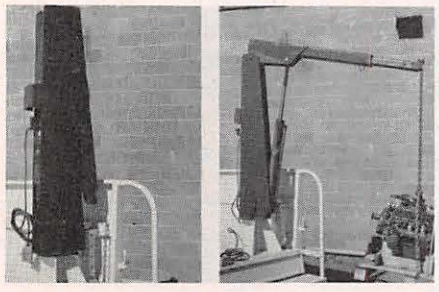
tions. Forged steel bolts adjust on 6-inch centers to hold the legs securely in place. Self-levelling aluminum alloy feet adapt to hard surfaces, and polypropylene rope threads through the feet to limit leg spread. The eyebolt at the apex swivels freely, always hanging in plumb to protect the head from twist and strain.

Circle 63 on Reader Service Card

Conveyor belt extender

For loading and unloading boxcars, trucks, or containers, a new 60-foot dockside extension to existing conveyor belts adjusts in length, height, and tilt angle. Offered by De Kuijper B.V. of the Netherlands, the extension has a 26¼-foot fixed section and a movable section that extends up to 34½ feet in length. The entire extension is 2½ feet wide, its capacity 2,200 pounds. An operation platform at the dock end accommodates the worker and controls for compressing or extending the movable section; raising, lowering, or tilting it (to maximum of 30°); and starting or stopping the two sections. The unit can be joined to an existing conveyor of any make.

Circle 64 on Reader Service Card



Truck crane

A new electric-hydraulic crane for use on 1-ton and heavier trucks is offered by GS Industries, Inc. Powered by the truck's electrical system, the Model EH-4 weighs only 350 pounds but has a capacity of 4,000 pounds. A manual extension adds 15 more inches of reach, where the capacity is 3,000 pounds. Stowed, the crane stands 64 inches above the truck bed. With boom in maximum vertical position, the reach is over 11 feet; an optional elevated well extends vertical reach by 1 foot. A double-acting hydraulic cylinder powers up and down movement, and remote control permits operation of the crane up to 15 feet from the load being worked.

Circle 65 on Reader Service Card

Locomotive-starting batteries

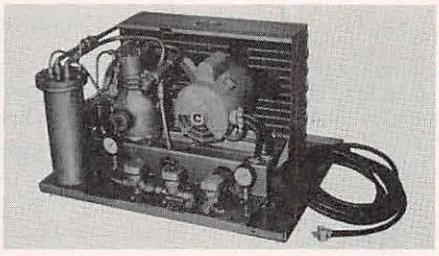
A new generation of low-maintenance, unitized batteries for diesel-starting application is offered by C&D Batteries. The units require watering only during major shop overhauls of the locomotives, or approximately once every five years, insuring a clean battery top and eliminating any possibility of an accidental short circuit across intercell connectors.

Circle 66 on Reader Service Card

Vegetation control

Now cleared by EPA for use in controlling certain woody plants in many noncropland areas, Spike 1G, 5G, and 80W broad-spectrum herbicides are now being offered by Elanco Products Co. for woody plant control in railroad rights-of-way and areas such as ditchbanks, firebanks, and fence rows. It is said to be effective in controlling many herbaceous and woody plants, including many tough woody species, such as white ash, elms, willow, and oak.

Circle 67 on Reader Service Card



Fluorocarbon recovery unit

Removal of R-12, R-22, R-502, and other fluorocarbons from large tanks used in charging refrigeration equipment, fire extinguishers, and similar devices is facilitated by new open-type vapor recovery units offered by Victaulic Co. of America. Victaulic BLU-COLD vapor recovery units convert the vapor that is often left in large charging tanks back to liquid to allow full recovery of the useable contents. Designed for easy connection and to meet OSHA safety requirements. Flare connections ease attachment and a 20-foot heavy-duty lead cord carries electrical power. Double-outlet valve connections allow purging of the system before disconnection for safety. Inlet and outlet pressure gauges provide high-low pressure control for automatic operation controlled by pressure entering the compressor. An optional unit has base, wheels, and handle for portability.

Circle 68 on Reader Service Card

New Literature

CONTROLS, CAB HEATERS. An 8-page brochure offered by Ogontz Controls Co. shows its products for the transportation industry, including freeze protection, cab heaters and defrosters, diagnostic devices, fluid- and air-sensing thermostats, mercury contactors, air velocity switches, and solid state cab signal testing apparatus.

Circle 80 on Reader Service Card

RAIL SPIKER. A bulletin offered by the Railway Equipment Division of Rexnord, Inc., describes the new Rexnord Model B Hydra-Spiker, with dual controls permitting two operators to do the work previously performed by three. Its operating and spiking mechanisms are between the wheels for unobstructed visibility by operators.

Circle 81 on Reader Service Card

TRACK TOOLS. A pocket-sized handbook offered by Woodings-Verona Tool Works, Inc., cites the new AREA specifications for railroad track tools and describes the company's track tools, including features of the new SAF-T-PLUS nonwood handle.

Circle 82 on Reader Service Card

FREIGHT TRAIN AIR DRYER. A 4-page folder offered by WABCO's Westinghouse Air Brake Division describes characteristics and operation of its D-2-B Air Dryer for freight train compressed air systems, which uses the regenerative dessicant method of lowering moisture content in train lines to help avoid freeze-ups in cold weather.

Circle 83 on Reader Service Card

THREADED FASTENERS. An 8-page brochure offered by Camcar Division of Textron, Inc., presents its TORX Drive System for threaded fasteners, which provides positive tool engagement with minimal wear and slippage, reducing worker fatigue and speeding production.

Circle 84 on Reader Service Card

CONTROL VALVES. A 4-page brochure offered by Rexroth Corp. describes its new generation 4-way, pilot-operated, directional control valves, providing high flow with low pressure drop and low leakage for longer service life, less downtime, and lower operating costs.

Circle 85 on Reader Service Card

FLAW DETECTOR. A brochure and data sheet offered by Automation Industries, Sperry Products Division, describes its new M90 Reflectoscope portable ultrasonic flaw detector, designed for high-penetration, high-resolution flaw detection.

Circle 86 on Reader Service Card

ASBESTOS CONVERSION. A 6-page "Asbestos Conversion Chart" offered by Harbour Industries, Inc., gives options for converting specific categories of asbestos wiring to wire insulated with fluorocarbons, silicone rubber, mica, and combination of these, to meet environmental requirements.

Circle 87 on Reader Service Card

Who is the world's largest manufacturer of forged wheels and mounted sets?

Wrong.

Wrong, that is, if you didn't say Valdunes. We make wheels from 20 inches to 61 inches in diameter, the biggest in the world. Wheels from 330 to 2200 pounds. Axles to any length or shape. For locomotives, passenger and freight cars, and unit trains.

Valdunes products are in use all over the transportation world and comply with the AAR technical specifications, service conditions, and safety regulations. We invite your inquiry.

VALDUNES
CREUSOT LOIRE
STEEL CORPORATION

400 Broadacres Drive • Bloomfield, N.J. 07003 • 201-893-0001

Circle 2 on Reader Service Card

WE HELP SLICE THE COST OF BRINGING HOME THE BREAD.

Burlington Northern is America's number one grain hauler. In fact, last year we originated 19.8 million tons of grain which produced a staggering quantity of bread, bagels, and buns.

Burlington Northern has over 13,000 cars suitable for hauling grain. Because of this capacity, we can haul the grain for a one pound loaf of bread more than 500 miles for less than a penny.

This year, Burlington Northern intends to add another 1,000 hopper cars. So we can help bring home the bread with even greater efficiency.

But transporting grain is only a part of the Burlington Northern story. We're a *total* transportation company. With subsidiaries like BN Transport, our trucking firm, and Burlington Northern Air Freight Inc. In addition, BN has extensive natural resource holdings including timber, coal and minerals.

No matter how you slice it, we're doing our part. Transporting basic food sources, timber for housing, and coal and minerals for much needed energy.

BURLINGTON NORTHERN